T N & Associates, Inc.
Engineering and Science

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5/10/01
CBT

May 10, 2001

Ms. Carolyn Thompson
Remedial Project Manager
U.S. Environmental Protection Agency
61 Forsyth Street, SW 11th Floor
Atlanta, Georgia 30303

Subject: Reassessment Report (final)
Photocircuits Atlanta, Inc.
EPA ID No. GAD095811162
EPA Contract No. 68-S4-01-01 (STAT 4)
Task Order No. 0001

Dear Ms. Thompson:

The TN & Associates, Inc. (TN&A) Superfund Technical Assessment Team (STAT) is submitting the revised cover page of the final reassessment report for the Photocircuits site in Peachtree City, Fayette County, Georgia. The reassessment report, scoresheets, confidential pages, CERCLA Eligibility form, all references cited, and the original topographic maps have not changed and were submitted to EPA on April 6, 2001.

Please contact me or Holly Stoddard at (678) 355-5550 if you have any questions regarding this report.

Sincerely,

Matt Ellender
STAT Project Manager

Enclosure

CC: Jeff Napier, EPA Contracting Officer (w/o enclosure)
Cindy Gurley, EPA Task Order Project Officer (w/o enclosure)
Stacy Hill, EPA Contract Specialist (w/o enclosure)

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REASSESSMENT REPORT

PHOTOCIRCUITS ATLANTA, INC.
PEACHTREE CITY, FAYETTE COUNTY, GEORGIA

U.S. EPA ID No. GAD095811162

Prepared for:

U.S. ENVIRONMENTAL PROTECTION AGENCY
Region 4
61 Forsyth Street
Atlanta, Georgia 30303

Prepared by:

TN & Associates, Inc.
840 Kennesaw Avenue, Suite 7
Marietta, Georgia 30060

Contract No.	:	68-S4-01-01
Task Order No.	:	0001
Date Submitted	:	May 10, 2001
EPA Task Monitor	:	Carolyn Thompson
Telephone No.	:	404-562-8913
Prepared by	:	Holly L. Stoddard
Telephone No.	:	678-355-5550

CERCLA Eligibility Form

Site Name: Photocircuits Atlanta, Inc.

City/County/State: Peachtree City, Fayette County, Georgia

EPA ID Number: GAD095811162

Type of Facility: Generator (LQG) X Transporter ___ Disposal ___
Treatment ___ Storage(> 90 days) ___

	Yes	No
Has this facility treated, stored, or disposed of a RCRA hazardous waste since Nov. 19, 1980?	X	
Has a RCRA Facility Assessment (RFA) been performed on this site?		X
Does the facility have a RCRA operating or post-closure permit? If so, date issued:		X
Did the facility file a RCRA Part A application?	X	
If so:		
1) Does the facility currently have interim status?		X
2) Did the facility withdraw its interim status?	X	
3) Is the facility a known or possible protective filer?		X
Is the facility a late (after Nov. 19, 1980) or non-filer that has been identified by EPA or the State?		X
Is the site a Federal Facility?		X
Is there at least one source on site, which is not covered by CERCLA Petroleum Exclusion Legislation?		X
Is the facility owned by an entity that has filed for bankruptcy under Federal or State laws?		X
Has the facility lost authorization to operate or had its interim status revoked?		X
Has the facility been involved in any other RCRA enforcement action?		X

CONTENTS

1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA) has tasked the TN & Associates, Inc., (TN&A) Superfund Technical Assessment Team (STAT) to perform site reassessments under contract number 68-S4-01-01. Reassessments are conducted to evaluate a site's current Hazardous Ranking System (HRS) status, document what is contained within the site files, update target information, generate a new site score, and summarize all the information in a report submitted to EPA. This Reassessment report has been prepared in accordance with the scope of work requirements of Task Order No. 0001, for the Photocircuits Atlanta, Inc. (Photocircuits site), EPA ID No. GAD095811162, located in Peachtree City, Fayette County, Georgia. This Reassessment Report evaluates the Photocircuits site and provides a recommendation regarding further action.

2.0 SITE BACKGROUND

This section describes the site and its present and past operations (including waste disposal practices and regulatory history), the environmental setting and geology, previous investigations, and the source areas located at the facility.

2.1.1 SITE DESCRIPTION

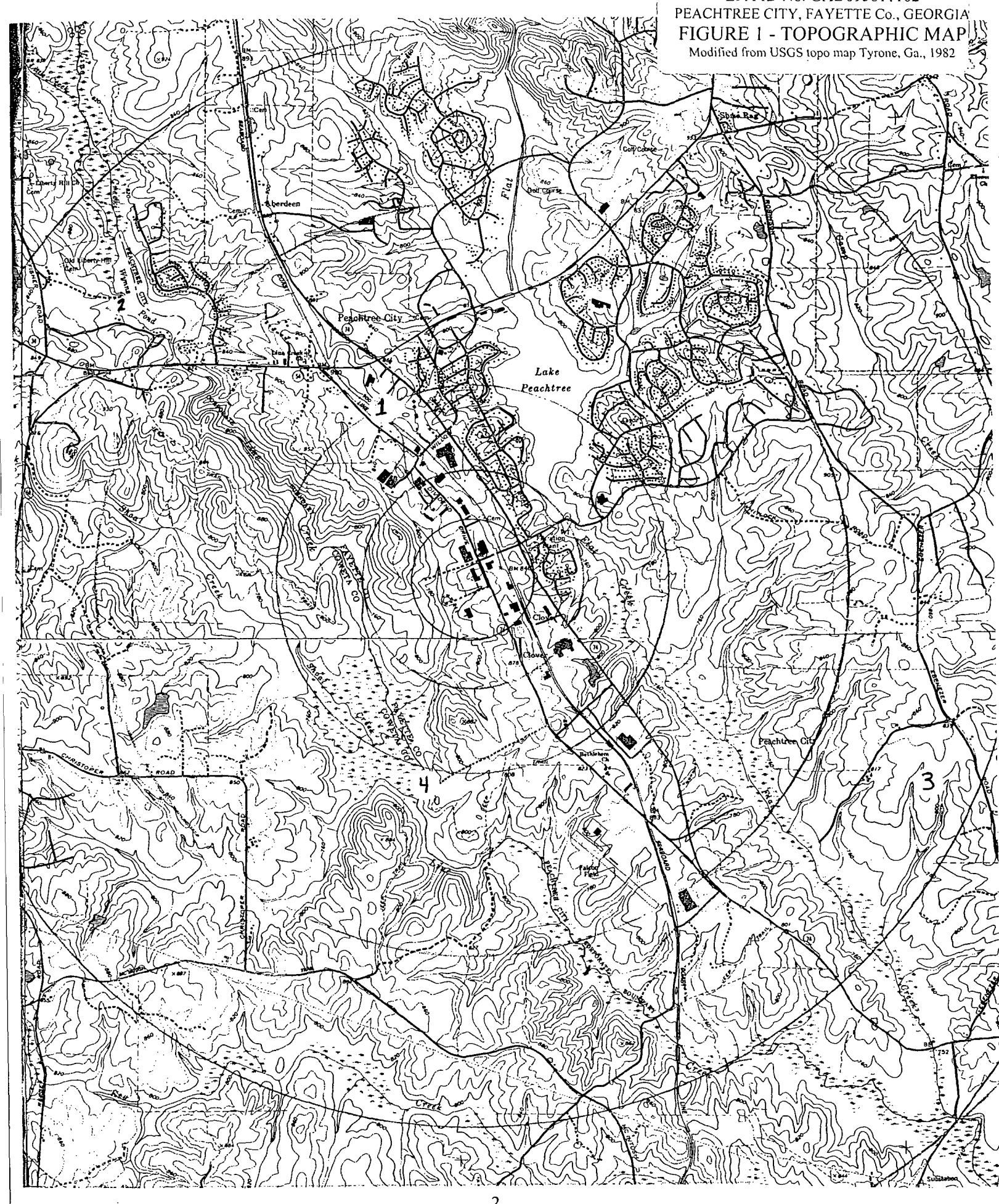
The Photocircuits facility is located in an industrial park on approximately 10 acres of predominantly flat, open terrain at 350 Dividend Drive in Peachtree City, Fayette County, Georgia (see Figure 1). The facility's specific geographic location is at 33° 22' 45" North latitude and 84° 35' 00" East longitude (Ref. 1). The major features are the manufacturing plant and the treatment plant building (see Figure 2).

The manufacturing plant houses general offices, all manufacturing activities, shipping and receiving. Waste and virgin product storage is at the rear or west of the manufacturing building on a paved, bermed lot and in a waste treatment plant building. Activities conducted in the waste treatment plant building consist of treatment of all manufacturing wastewater generated by the facility. Approximately 80 percent of the facility is paved and is used for parking and virgin material/waste storage.

PHOTOCIRCUITS ATLANTA, INC.
EPA ID No. GAD095811162
PEACHTREE CITY, FAYETTE Co., GEORGIA

FIGURE 1 - TOPOGRAPHIC MAP

Modified from USGS topo map Tyrone, Ga., 1982



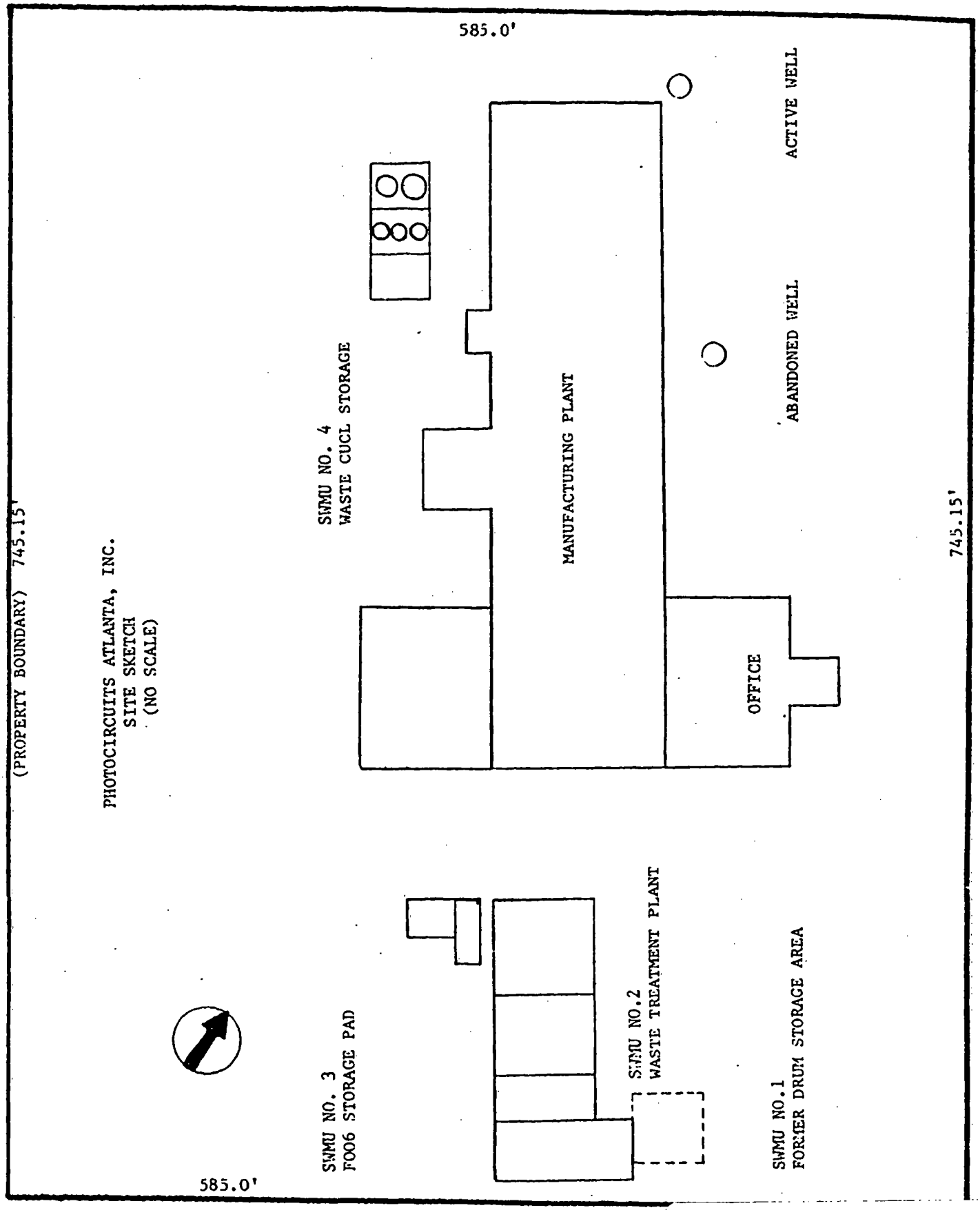


FIGURE 2

PHOTOCIRCUITS ATLANTA,INC
EPA ID NO. GAD095811162
PEACHTREE CITY, FAYETTE Co. GEORGIA
FIGURE 2 - SITE DIAGRAM
Copied from Preliminary Assessment, 1989

2.1.1 Site History

According to the 1989 Preliminary Assessment (PA), the facility was previously operated as Topri, Incorporated under the ownership of Tokyo Print Industries, Ltd. of Japan (Ref. 2, p. 2). Topri submitted a Notification of Hazardous Waste Activity Form EPA 8700-12 dated August 19, 1980 (Ref. 2, p. 2). By correspondence dated January 11, 1982, Topri advised EPD that it intended to cease operations (Ref. 2, p. 2). Information regarding activities of Topri is very limited since there are no U.S. contacts familiar with the company's former operations at the facility.

Photocircuits Atlanta, a wholly owned subsidiary of Kollmorgen Corporation, submitted EPA Form 8700-12 dated April 7, 1982 indicating ownership and operation of the facility and currently owns the property (Ref. 2, p. 3, 3). Photocircuits also owns a facility at 810 Dividend Drive, Peachtree City, Georgia 30269 that was acquired in 1993 (Ref.4). This facilities Handler ID is GAD984318899 (Ref. 5).

Photocircuits Atlanta manufactures printed circuit boards for the electronics industry. Hazardous wastes are generated from cleaning, etching and electroplating operations. The process begins with a non-conductive fiberglass laminate board which undergoes an acid copper electroplate. The copper plated board is then rough and finish sanded, washed with HCl, water rinsed and dried to remove film, grease, and oxidized materials. The circuits are then ink printed onto the cleaned boards. The printed board is dried and then etched in a CuCl/HCl bath leaving only copper on the board under the ink-coated circuit. The board is then washed in dilute HCl, water-rinsed and dried. A solder mask is then screened onto the circuit and the board undergoes a FeCl rinse prior to hot air solder leveling. The circuit legend is stenciled onto the back of the board, the surface is cleaned, and the completed board is packaged for shipment (Ref. 2, p. 3).

2.1.2 Regulatory History

Regulatory records for the Photocircuits begin in 1981, when a Part A Application for a Hazardous Waste Facility Permit dated January 21, 1981 was submitted to U.S. EPA Region IV by Topri, Incorporated. The application identified Topri Inc. as the owner and operator of the facility. Solid waste management units identified by the application are summarized in Table 1 (Ref. 2, p. 5). A revised Part A Application dated September 13, 1982 identified Photocircuits Atlanta, Inc. as the new operator and Kollmorgen Corporation as the new owner. Hazardous waste management activities described by the revised Part A were similar to those described by the Topri Part A with the exception of revised estimate of annual waste

quantities (Ref. 2, p.5). During an inspection by the Georgia Environmental Protection Division (GAEPD) on March 2, 1984, it was determined that the facility's regulatory status was that of a generator rather than a treatment, storage or disposal facility (TSD). By correspondence dated May 24, 1984, GAEPD acknowledged Photocircuit's earlier request for withdrawal of its Part A and change in status to generator (Ref. 2, p. 5). GAEPD has inspected the facility on May 8, 1980; March 2, 1984; October 19, 1984; February 25, 1988 and June 29, 1988.

During the October 19, 1984 inspection violations of 40 CFR 262.35(a)(4) were observed and a request for corrective measures was made in a November 6, 1984 Notice of Violation (Ref. 2, p.5). By a Compliance Status Letter dated March 7, 1984, GAEPD verified that all violations had been eliminated (Ref. 2, p. 6). Photocircuits currently maintains a large quantity generator RCRA permit (Ref. 10). The EPA TRI database identifies the specific compounds Photocircuits is permitted to release (Ref. 11 p. 2).

2.2 ENVIRONMENTAL SETTING AND GEOLOGY

The average annual temperature in Peachtree City is 61.4°F. The average summer temperature is 87°F, and winter temperature is 34°F. The average rainfall is 48.61 inches per year (Ref. 6, p.1). The mean annual lake evaporation in the area is 41 inches per year, yielding an annual net precipitation of 7.61 inches (Ref. 7). The 2-year, 24-hour rainfall event for the area is approximately 4 inches (Ref. 8, p. 95).

Photocircuits is located in an industrial park on approximately 10 acres of predominantly flat, open terrain. No residential homes are located within 0.50 miles of Photocircuits; however approximately 38 residential homes are located within one mile. The majority of residential populations are located within the 2 to 3 mile radius ring, which encompasses the majority of Peachtree City (Ref. 1).

Geologic formations found at the subject site are included in the Atlanta Group of the south Piedmont Lithiostratigraphic Province (Ref. 2, p. 9). Rock types in the subject area associated with this group consist primarily of gneiss, schist, amphibolite and granitic gneiss containing biotite, muscovite, quartz and feldspar in order of increasing abundances. The base of the units within the Province are not exposed, therefore their thickness is not known (Ref. 2, p. 9).

Generally, rocks throughout the Province strike northeast and dip southeast; however, local anomalies do occur. Schistosity roughly parallels structural strike and dip offering conduits for granitic intrusion (Ref.

2, p. 9). Quartz and mica schist typically weather to a reddish sandy soil while amphibolite and hornblende gneiss decompose to a yellow-brown clayey soil (Ref. 2, p. 9).

The only major hydrogeologic units present in Fayette County are Crystalline-rock aquifers (Ref. 17). Groundwater is transmitted through secondary openings along fractures, foliation, joints, contacts or other features in the crystalline bedrock consisting of granite, gneiss, schist, and quartzite. These aquifers are not laterally extensive as the storage is in the regolith and fractures. Because of this, the hydrology of the Crystalline-rock aquifers is not well understood. Wells penetrating in to the Crystalline-rock aquifers are present throughout Georgia; but in Piedmont, the surficial aquifers consist of soil, saprolite, stream alluvium, colluvium, and other surficial deposits (Ref. 18).

2.3 PREVIOUS RELEASES AND INVESTIGATIONS

The CERCLIS database listed the site discovery by the GAEPD as occurring on August 1, 1980. The database also identified a PA conducted by GAEPD on December 30, 1985 (Ref. 5). Another PA was written in June of 1989 documenting the site history and potential receptors, and included a visual site inspection (VSI) conducted on May 17, 1989. A description was given of the manufacturing process, identified waste streams and identified physical locations of solid waste management units (SWMU) on a site sketch. Hazardous Waste Manifests were reviewed for 1988 and 1989 to determine waste characteristics and quantities for that time period. A visual inspection at the entire facility was conducted to evaluate each SWMU(Ref. 2, p. 12).

TABLE 1
SOLID WASTE MANAGEMENT UNITS
PHOTOCIRCUITS ATLANTA, INC.
FAYETTE COUNTY, GEORGIA

Location Number (Fig. 2)	Name	RCRA Regulated	Status
1	Former Drum Storage Area	Yes	Inactive
2	Waste Treatment Plant	No	Active
3	F006 Storage Pad	Yes	Active
4	Waste CuCl Storage	Yes	Active

No further assessments or investigations were documented to occur and the outcome of the 1989 site inspection was listed as "Deferred to RCRA (Subtitle C)" (Ref. 9).

On February 25, 1988, an inspection was conducted to investigate an anonymous compliant regarding an alleged hole in a sump receiving influent to the wastewater treatment system (Ref. 2, p. 6). The inspection confirmed that no release had occurred from the subject unit. However, it was observed that some spillage of F006 onto pavement surrounding the F006 storage area had occurred (Ref. 2, p. 6). Numerous violations of 40 CFR 262.34(a)(1), (2), and (4) were observed during the inspection and a request for corrective measures was made in a March 23, 1988 Notice of Violation (Ref. 2, p. 6). On June 29, 1988, an inspection was conducted as a follow-up to the February 25, 1988 inspection and also to assess the facility's compliance with 40 CFR 262.34(a)(1) [40 CFR 265.191] relative to hazardous waste accumulation in tanks. The facility was found to be in compliance with violations observed during the February 24, 1988 inspection. However, numerous violations of the tank standards were observed and a request for corrective measures was made in Notice of Violation dated August 18, 1988 (Ref. 2, p. 6).

2.4 SOURCE AREAS

The facility generates five waste streams are described as follows and listed in order of volume generated:

1. Spent Cupric Chloride Solution (Copper)(D002). This waste stream is generated as a result of etching and plating operations. Spent CuCl is stored in two interconnected fiberglass above ground storage tanks (2,500 gallons and 5,000 gallons) and is pumped from the manufacturing plant via above ground piping. Spent CuCl is recycled between the plating and etching lines and the storage tanks. When the CuCl is no longer suitable for use it is removed from the system by tank truck and manifested to an off-site facility for regeneration.
2. Wastewater treatment sludge (F006). The facility operates a wastewater treatment plant, which treats all wastewaters from its manufacturing operations prior to discharge to the Georgia Utilities Company (Peachtree City) sewage system. Wastewater from manufacturing operations is segregated into metal bearing (etching, plating) and non-metal bearing (acid/alkaline wash and inks). Non-metal bearing wastewater is pH adjusted and undergoes basic treatment prior to discharge while metal bearing wastewater undergoes pH adjustment, precipitation, flocculation and sludge filtration prior to discharge. Flocced and precipitated sludge is filter pressed to extract remaining liquids. The resulting sludge is placed in large plastic bags and stored in the F006 storage area at the rear or

western end of the building. The waste is manifested in less-than-90-day intervals to an off-site facility.

3. Rolled lead solder flux (D008). This waste is generated from the hot air solder leveling operation. The spent solder flux is placed in fifty-five gallon drums and stored at the F006 storage area where it is manifested in less-than-90-day intervals to an off-site facility.
4. General trash. This waste is generated from paper and plastic packaging, containers and cartons, pallets, etc. Waste is placed in a 30 year roll-off container at the rear of the manufacturing plant and hauled to a sanitary landfill.
5. Spent Solvents (F001). The facility has a vapor degreaser following the hot air solder leveling operation which uses 1,1,1-trichloroethane solvent to clean completed boards. Since December 1987, one 55-gallon drum of spent solvent has reportedly been generated from this unit (Ref. 2, p. 5).

3.0 PATHWAYS

This section discusses the groundwater migration, surface water migration, soil exposure, and air migration pathways. This section also discusses the targets associated with each pathway and draws pathway-specific conclusions.

3.1 GROUNDWATER MIGRATION PATHWAY

The groundwater migration pathway is a pathway of concern because three public groundwater wells have been identified within a 4-mile radius of the site. Two of the wells, the Loghouse and Willowbend Well, are part of the blended Fayette County Water System (FCWS). FCWS is comprised of five wells, six surface water intakes, and water provided by Fayetteville and Atlanta. The surface water intakes provide 89.6percent, wells provide 4.6 percent, Fayetteville provides 2.2percent and Atlanta provides 3.5percent of the water to Fayette County residents. The entire system provides drinking water to 51, 457 people in Fayette County (Ref. 20). The wells only provide 4.6 percent of the entire water system, which calculates to 2,367 or 473 people per well (Ref. 23).

Shoal Creek well is the third well located within the 3-4 mile ring and provides local residents of Shoal Creek Subdivision. The subdivision is comprised of 131 houses or 345 people. The number of people is based on the State Estimates of Housing Units in Georgia (Ref. 19, 22).

TABLE 2

Potential Groundwater Receptors

Distance / Radius Ring	Potential Receptor Population
0 – 0.25 Mile	0
0.25 – 0.5 Mile	0
0.5 – 1 Mile	473
1 – 2 Mile	0
2 – 3 Mile	473
3 – 4 Mile	345*

* The population was calculated by multiplying the 131 houses in Shoal Creek Subdivision by 2.63, which is the state estimates of residents per housing units for Georgia.

3.2 SURFACE WATER PATHWAY

Surface water pathway is also a pathway of concern, since Photocircuits has a surface water pathway within 1000 feet of the facility. The unnamed tributary blends with Line Creek and FCWS has a surface intake approximately one mile down gradient from the facility (Ref. 1). The FCWS is a blended system that serves 51,457 people and provides 3,149,768,729 gallons per year within Fayette County (Refs. 20, 23). The Line Creek intake provides 34,092,000 gallons of water per year to the FCWS or 1.1 percent of the total water contribution (Ref. 26). A population of 566 was determined to be served by Line Creek. Based on the topographic map, the average flow rate of Line Creek is estimated between 10 - 100 cfs (Ref. 1). The 15-mile target distance limit (TDL) continues through Line Creek into Coweta County terminating within Line Creek (Ref. 1).

Sensitive environments identified along the surface water pathway include 13 total miles of eligible wetland frontage in Line Creek (Ref. 27). The only endangered animal in Fayette County is the Highscale Shiner (Notropis hypsilepis) (Ref. 28). Fayette County has no protected plants.

3.3 SOIL EXPOSURE PATHWAY

The soil exposure pathway is of minimal concern at Photocircuits. All manufacturing activities occur inside the buildings. No soil contamination has been documented and approximately 80percent of the facility is paved and used for parking (Ref. 2, p. 2).

3.4 AIR PATHWAY

The air pathway is of minimal concern at the Photocircuits site as no evidence exists to suggest any type of threat, no violations have been documented and no air samples have been collected to document a release.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The Photocircuits Atlanta, Inc. facility is currently an active circuit board manufacturing plant. No environmental samples have been collected from the facility. Previous Investigations identified four solid waste management units whose contents resulted in four sources when evaluated under current the HRS guidelines: spent cupric chloride solution (copper), wastewater treatment sludge from electroplating activities (F006 heavy metals), rolled solder flux (lead), and 1,1,1-trichloroethane solvent (F001).

Groundwater and surface water pathways were evaluated for Photocircuits. Although no samples have been collected from the facility, pathway scores were generated using realistic worst-case assumptions of contamination. Due to the limited number of potential receptors, no pathway generated an elevated score. Because the site does not generate an appreciable HRS score, even in worst-case scenarios, no further remedial action planned (NFRAP) is recommended at this time for the Photocircuits Atlanta, Inc. facility.

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CONFIDENTIAL

HAZARD RANKING SYSTEM SCORE FOR PHOTOCIRCUITS ATLANTA, INC. PEACHTREE CITY, FAYETTE COUNTY, GEORGIA EPA ID NO. GAD095811162

A Hazardous Ranking Score has been prepared using the Hazard Ranking System (HRS) score sheets for the Photocircuits Atlanta, Inc. (Photocircuits) site, located in Peachtree City, Fayette County, Georgia. The groundwater and surface water pathways were evaluated using data obtained from U.S. Environmental Protection Agency (EPA) site files and the Preliminary Assessment conducted by the Georgia Environmental Protection Division (GAEPD) in 1989. No current site files are available from the GAEPD. The following scores represent a worst-case scenario in areas where data gaps were present. The data gaps are discussed below.

Pathway Scores

Groundwater Pathway Score (S_{GW})	=	2.72
Surface Water Pathway Score (S_{SW})	=	4.1
Soil Exposure Pathway Score (S_{SE})	=	0
Air Pathway Score (S_{AIR})	=	0

OVERALL SITE SCORE = 2.46

Sources and Waste Characteristics

The site score for Photocircuits was based on a hazardous waste quantity (HWQ) value of 100 for the groundwater and surface water pathways. Due to conflicting data in the PA and the reference material, the amount of waste was determined by the amount that could be stored on site. All the waste is taken to an off- site disposal center. The highest amount of each waste was used to ensure highest possible scoring (i.e., worst-case scenario). The waste quantity was based on the current owner's waste storage and annual production. Photocircuits stores 7,500 gallons of cupric chloride (CuCl) solution and produces 54,000 gallons of spent CuCl solvent per year, 236 tons of wastewater treatment sludge per year, 250 pounds of

lead per year, and 55 gallons of 1,1,1-trichloroethane solvent per year. Since all of the wastes are removed from site and sent to off-site facilities for disposal, only on-site volumes or total annual waste generations were considered.

The copper is generated from laminating circuit boards. Each board undergoes an acid copper electroplating and then is sanded, washed, rinsed, and dried. The copper is recycled and reused until it is no longer suitable and then it is removed from the site for regeneration. Acids documented on site include nitric acid, sulfuric acid, and hydrochloric acid (Ref. 14). The wastewater treatment sludge is assumed to contain nickel, zinc, and lead. The lead is generated from leveling the circuit boards. 1,1,1-Trichloroethane solvent is used to clean the circuit boards in the final process.

Groundwater Migration Pathway

The groundwater migration (GW) pathway scored a 2.72. The score was based on having three wells within the 4-mile radius of Photocircuits. The wells are Loghouse Well, Willowbend Well, and Shoal Creek Well. The Loghouse and Willowbend wells contribute to the local water system, Fayette County Water System. The Fayette County Water System has a total of five wells, which provide approximately 4.6 percent of the water for the entire county, serving 51, 457 people. Calculating 4.6 percent of 51,457 gives a total of 2,367 people being served by wells. Because there are five wells it is calculated that each well serves approximately 473 people. Tony Parrot, Director of Fayette County Water System, discovered that the well depths are unknown but stated that they were greater than 70 feet deep. The Loghouse Well is believed to be 310–350 feet deep. The Shoal Creek Well is located in Coweta County and serves a local housing area called Shoal Creek Subdivision. According to the GAEPD Department of Natural Resources web site, a list of water sources identified Shoal Creek as serving 345 people.

Because no groundwater samples have been collected from Photocircuits, the GW pathway was evaluated based on a Potential to Release (PR) default factor value of 340. The potential contamination targets resulted in a value of 27.7, and the Nearest Well point value was 9, resulting in a Sum of Targets value (T) of 36.7 for the GW pathway. The Waste Characteristics value (WC) was determined to be 18 based on the toxicity and mobility value of sulfuric acid.

Surface Water Migration Pathway

The surface water (SW) migration pathway generated the highest pathway score of 4.1. Approximately 1,000 feet from Photocircuits is an unnamed tributary, which flows into Line Creek. The Fayette County Water System (FCWS) draws its water from a surface water intake from Line Creek down stream from where the unnamed tributary flows into Line Creek. The FCWS is a blended system that serves 51,457 people and provides 3,149,768,729 gallons per year within Fayette County. The Line Creek intake provides 34,092,000 gallons of water per year to the FCWS or 1.1 percent of the total water contribution. A population of 566 was determined to be served by Line Creek.

Other SW targets include the 13 miles of eligible wetland frontage in Line Creek. The only state-listed threatened animal in Fayette County is the highscale shiner (*Notropis hypsilepis*). Fayette County has no federal or state protected plants (Ref. 28).

Since no environmental samples have been collected, the SW pathway score was based on a worst-case Likelihood of Release value (LR) of 500. For the Drinking Water Threat component of the SW pathway, the Target value (T) was 54.1 due to Line Creek having an intake for the local water system, and the Waste Characteristics value (WC) was 32, resulting in a Drinking Water Threat component score of 10.49.

For the Human Food Chain component of the SW pathway, a Target value (T) of 0 was used due to no fisheries being located in the surface water pathway. A Waste Characteristic (WC) value of 56 was used due to the high bioaccumulation value for lead. These values resulted in a Human Food Chain component score of 0.

For the Environmental Threat component of the SW pathway, a Target value (T) of 2.12 was determined for potential contamination of 13 miles of eligible wetland frontage in Line Creek. The Waste Characteristic (WC) value of 100 was due to the ecotoxicity, persistence, and bioaccumulation values of lead and copper. These values resulted in an Environmental Threat component of 2.12. Adding the three components of the SW pathway together results in the SW pathway score of 12.61.

Soil Exposure Pathway

The soil exposure pathway is of minimal concern at Photocircuits. All activities occur inside the buildings. No soil contamination has been documented, and approximately 80 percent of the facility is paved and used for parking (Ref. 2, p. 2).

Air Migration Pathway

The air pathway is of minimal concern at the Photocircuits site as no evidence exists to suggest any type of threat, no violations have been documented, and no air samples have been collected to document a release.

Conclusions

The Photocircuits Atlanta, Inc., site is 10-acre circuit boards manufacturer located in an industrial park. Photocircuits currently holds a Resource Conservation and Recovery Act generator permit for the four hazardous wastes identified on site: wastewater treatment sludge (nickel, zinc, and lead), spent cupric chloride solution (copper), rolled solder flux (lead), and 1,1,1-trichlorothane. All Hazardous Materials are manifested off site for proper disposal.

A subsequent review of the file material and the resulting worst-case scoring of the site failed to generate an appreciable HRS score. Based on the information gathered and the resulting low HRS score, a designation of No Further Remedial Action Planned (NFRAP) is recommended.

GROUNDWATER MIGRATION PATHWAY SCORESHEET

FACTOR CATEGORIES AND FACTORS

Likelihood of Release to an Aquifer	Maximum Value	Assigned Value
1. Observed Release	550	
2. Potential to Release		
2a. Containment	10	
2b. Net Precipitation	10	
2c. Depth to Aquifer	5	
2d. Travel Time	35	
2e. Potential to Release	500	340
3. Likelihood of Release (Higher of Lines 1 or 2e)	550	340
Waste Characteristics		
4. Toxicity/Mobility	10,000	1,000
5. Hazardous Waste Quantity	1,000,000	100
6. Waste Characteristics	100	18
Targets		
7. Nearest Well	50	9
8. Population		
8a. Level I Contamination	No Maximum	
8b. Level II Concentrations	No Maximum	
8c. Potential Contamination	No Maximum	27.7
8d. Population (Lines 8a + 8b + 8c)	No Maximum	27.7
9. Resources	5	
10. Wellhead Protection Area	20	
11. Targets (Lines 7 + 8d + 9 +10)	No Maximum	36.7

Groundwater Migration Score for Crystalline Rock Aquifer

12. Aquifer Score (Lines 3 × 6 × 11 / 82,500) 340 x 18 x 36.7 / 82,500 = 2.72	100	2.72

Groundwater Migration Pathway Score

13. Groundwater Migration Pathway Score (S_{GW}) (Highest value from Line 12 for all aquifers evaluated)	100	**2.72**

SURFACE WATER OVERLAND/FLOOD MIGRATION PATHWAY SCORESHEET
DRINKING WATER THREAT COMPONENT (Part 1 of 3)

FACTOR CATEGORIES AND FACTORS

Likelihood of Release to Surface Water	Maximum Value	Assigned Value
1. Observed Release	550	
2. Potential to Release		
2a. Distance to surface water <2500 feet	500	500
Distance to surface water >2500 feet and:		
2b. Site in annual or 10-year floodplain	500	
2c. Site in 100-year floodplain	400	
2d. Site in 500-year floodplain	300	
2e. Site outside 500-year floodplain	100	
3. Likelihood of Release (LR) (Highest value of Lines 1, 2a, 2b, 2c, 2d, or 2e)	550	500

Waste Characteristics			
4. Toxicity/Persistence	10,000	10,000	
5. Hazardous Waste Quantity	1,000,000	100	
6. Waste Characteristics (WC)	1,000		32

Targets			
7. Nearest Intake	50	2	
8. Population			
8a. Level I Concentrations	No Maximum		
8b. Level II Concentrations	No Maximum		
8c. Potential Contamination	No Maximum	5.2	
8d. Population (Lines 8a + 8b + 8c)	No Maximum	5.2	
9. Resources	5	0	
10. Targets (T) (Lines 7 + 8d + 9 + 10)	No Maximum		7.2

Surface Water Migration Score for Drinking Water Threat Component

11. Drinking Water Threat Score (Lines 3 × 6 × 10 / 82,500)	100	**1.00**
500 × 32 × 7.2 / 82,500 = 1.00		

SURFACE WATER OVERLAND/FLOOD MIGRATION PATHWAY SCORESHEET
HUMAN FOOD CHAIN THREAT COMPONENT (Part 2 of 3)

FACTOR CATEGORIES AND FACTORS

Likelihood of Release to Surface Water	Maximum Value	Assigned Value
12. Likelihood of Release (LR) (Value from Line 3)	550	500
Waste Characteristics		
13. Toxicity/Persistence/Bioaccumulation	5E + 12	5E + 5
14. Hazardous Waste Quantity	1,000,000	100
15. Waste Characteristics (WC)	1,000	56
Targets		
16. Food Chain Individual	50	
17. Population		
17a. Level I Concentrations	No Maximum	
17b. Level II Concentrations	No Maximum	
17c. Potential Human Food Chain Contamination	No Maximum	2
17d. Population (Lines 17a + 17b + 17c)	No Maximum	2
18. Targets (T) (Lines 16 + 17d)	No Maximum	2

Surface Water Migration Score for Human Food Chain Threat Component

19. Human Food Chain Threat Score (Lines 12 × 15 × 18 / 82,500) 500 × 56 × 2 / 82,500 = 0.68	100	**0.68**

SURFACE WATER OVERLAND/FLOOD MIGRATION PATHWAY SCORESHEET
ENVIRONMENTAL THREAT COMPONENT (Part 3 of 3)

FACTOR CATEGORIES AND FACTORS

Likelihood of Release to Surface Water	Maximum Value		Assigned Value
20. Likelihood of Release (LR) (Value from Line 3)	550		500
Waste Characteristics			
21. Ecotoxicity/Persistence/Ecobioaccumulation	5E + 12		5E + 6
22. Hazardous Waste Quantity	1,000,000		100
23. Waste Characteristics (WC)	1,000		100
Targets			
24. Sensitive Environments			
24a. Level I Concentrations	No Maximum		
24b. Level II Concentrations	No Maximum		
24c. Potential Contamination	No Maximum		4
24d. Population Value of Sensitive Environments (Lines 24a + 24b + 24c)	No Maximum		4
25. Targets (T) (Value from Line 24d)	No Maximum		4
Surface Water Migration Score for Environmental Threat Component			
26. Environmental Threat Score (Lines 20 × 23 × 25 / 82,500) 500 × 100 × 4 / 82,500 = 2.42		60	**2.42**
Surface Water Migration Score for Overland/Flood Migration Pathway			
27. Surface Water Pathway Score (S_{SW}) (Drinking Water Score + Food Chain Score + Environmental Score) 1 + 0.68 + 2.42 = 4.1		100	**4.1**

Note: Groundwater to surface water component not evaluated as the local topography prohibits this occurrence.

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SITE INSPECTION WORKSHEETS

This appendix consists of worksheets that can be used to generate and SI site score. Completion of these worksheets is not required, but the SI investigator must evaluate an SI score, either by these worksheets, PREscore, or other Regional scoring tools.

The worksheets consist of instructions and data tables to be filled in with scores from HRS reference tables. The data tables may also call for Data Type and References.

DATA TYPES: The Data Type columns should be filled in with and **H, Q** or **+** if the data are HRS quality and well documented. The Data Type column should be filled in with an **E, X** or **-** if the data represent estimates, approximations, or are not fully documented. This type identifies data gaps for the expanded SI to investigate.

REFERENCES: The Reference columns should be filled in with coded reference numbers. The numbered reference list should be attached or the numbering should be cross-referenced to the SI Narrative Report.

The SI investigator will need the current Superfund Chemical Data Matrix (SCDM) OSWER Directive 9345.1-13 (revised semi-annually) to complete these worksheets.

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SITE INSPECTION WORKSHEETS

CERCLIS IDENTIFICATION NUMBER
GAD095811162

SITE LOCATION			
SITE NAME: LEGAL, COMMON, OR DESCRIPTIVE NAME OF SITE			
Photocircuits Atlanta, Inc.			
STREET ADDRESS, ROUTE, OR SPECIFICE LOCATION IDENTIFIER			
350 Dividend Drive			
CITY	STATE	ZIP CODE	TELEPHONE
Peachtree City	Georgia	30269	(404) 487-8888
COORDINATES: LATITUDE AND LONGITUDE		TOWNSHIP, RANGE, AND SECTION	
33° 22' 40" N., 84° 35' 00" E.			

OWNER/OPERATOR IDENTIFICATION					
OWNER			OPERATOR		
Photocircuits Atlanta, Inc.			Photocircuits Atlanta, Inc.		
OWNER ADDRESS			OPERATOR ADDRESS		
31 Sea Cliff Avenue			350 Dividend Drive		
CITY			CITY		
Glen Cove			Peachtree City		
STATE	ZIP CODE	TELEPHONE	STATE	ZIP CODE	TELEPHONE
New York	11542	(516) 609-1000	Georgia	30269	(770) 487-8888

SITE EVALUATION		
AGENCY/ORGANZATION TN & Associates, Inc. for Region 4 EPA Superfund Technical Assessment Team (STAT) contract		
INVESTIGATOR Holly L. Stoddard		
CONTACT Matt Ellender		
ADDRESS 840 Kennesaw Avenue, Suite 7		
CITY Marietta	STATE Georgia	ZIP CODE 30060
TELEPHONE 678-355-5550	SUBMITTED April 2001	

Reference: 1, 2, 3

GENERAL INFORMATION

Site Description and Operational History: Provide a brief description of the site and its operational history. State the site name, owner, operator type of facility and operations, size of property, active or inactive status, and years of waste generations. Summarize waste treatment, storage, or disposal activities that have or may have occurred at the site; note whether these activities are documented or alleged. Identify all source types and prior spills, floods, or fires. Summarize highlights of the PA and other investigations. Cite references.

The Photocircuits Atlanta, Inc. facility is located in an industrial park on approximately 10 acres of predominantly flat, open terrain at 350 Dividend Drive in Peachtree City, Fayette County, Georgia (Figures 1 & 2)(Ref. 1). The facility's specific geographic location is at 33° 22' 45" North latitude and 84° 35' 00" East longitude (Ref.1). The major features are the manufacturing plant and the treatment plant building (Figure 2). The manufacturing plant houses general offices, all manufacturing activities, shipping and receiving. Waste and virgin product are stored at the rear or west of the manufacturing building and the waste treatment plant building. Activities conducted in the waste treatment plant building consist of treatment of all wastewater generated by manufacturing at the facility. Approximately 80% of the facility is paved and is used for parking and virgin material/waste storage (Ref. 1, p.2).

According to the 1989 preliminary assessment, the facility was previously operated as Topri, Incorporated under the ownership of Tokyo Print Industries, Ltd. of Japan. Topri submitted a Notification of Hazardous Waste Activity Form EPA 8700-12 dated August 19, 1980. By correspondence dated January 11, 1982, Topri advised EPD that it intended to cease operations (Ref. 2, p. 2). Information regarding activities of Topri is very limited since there are no U.S. contacts familiar with the company's former operations at the facility. Photocircuits Atlanta, a wholly owned subsidiary of Kollmorgen Corporation, submitted EPA Form 8700-12 dated April 7, 1982 indicating ownership and operation of the facility (Ref. 2, p. 3) and currently owns the property (Ref. 3).

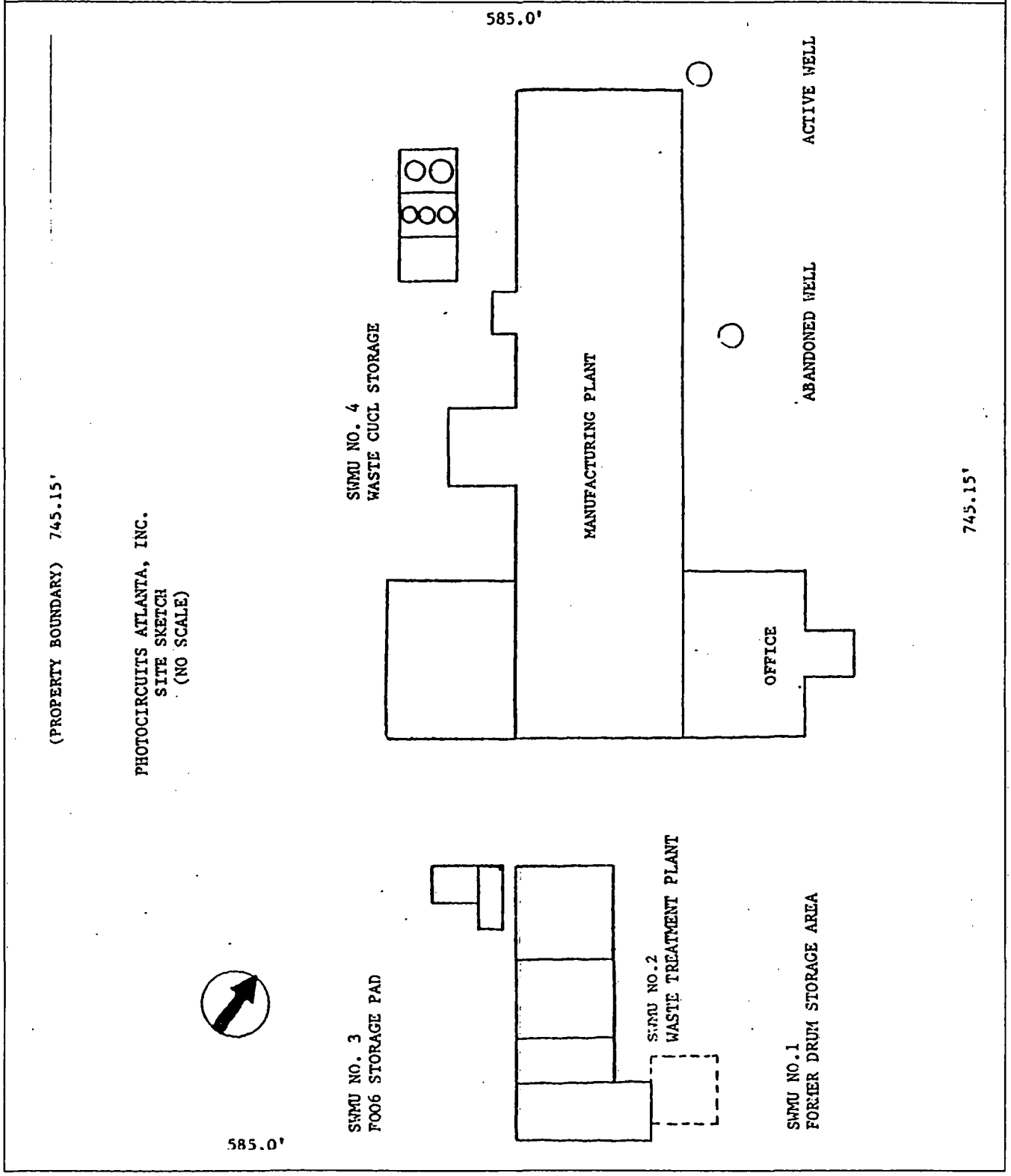
Photocircuits Atlanta manufactures printed circuit boards for the electronics industry. Hazardous wastes are generated from cleaning, etching and electroplating operations. The process begins with a non-conductive fiberglass laminate board which undergoes an acid copper electroplate. The copper plated board is then rough and finish sanded, washed with HCl, water rinsed and dried to remove film, grease, and oxidized materials. The circuits are then ink printed onto the cleaned boards. The printed board is dried and then etched in a CuCl/HCl bath leaving copper on the board only under the in-coated circuit. The board is then washed in dilute HCl, water-rinsed and dried. A solder mask is then screened onto the circuit and the board undergoes a FeCl rinse prior to hot air solder leveling. The circuit legend is stenciled onto the back of the board, the surface is cleaned with and the completed board is packaged for shipment.

On January 21, 1981 a Part A Application for a Hazardous Waste Facility Permit was submitted to U.S. EPA Region IV by Topri, Incorporated. The application identified Topri Inc. as the owner and operator of the facility. Hazardous waste management activities identified by the application are summarized in Table 1 (Ref. 2, p. 5). A revised Part A Application dated September 13, 1982 identified Photocircuits Atlanta, Inc. as the new operator and Kollmorgen Corporation as the new owner. Hazardous waste management activities described by the revised Part A were similar to those described by the Topri Part A with the exception of revised estimated annual quantity of wastes (Ref. 2, p.5). During an inspection of EPD on March 2, 1984, it was determined that the facility's regulatory status was that of a generator rather than a treatment, storage or disposal facility (TSD) and by correspondence dated May 24, 1984, EPD acknowledged Photocircuit's earlier request for withdrawal of its Part A and change in status to generator (Ref. 2, p. 5). Georgia EPD has inspected the facility on May 8, 1980; March 2, 1984; October 19, 1984; February 25, 1988 and June 29, 1988. During the October 19, 1984 inspection violations of 40 DFR 262.35(a)(4) were observed and a request for corrective measures was made in a November 6, 1984 Notice of Violation (Ref. 2, p.5). By compliance Status Letter dated March 7, 1984, EPD verified that all violations had been eliminated (Ref. 2, p. 6).

Photocircuits currently maintains a large quantity generator RCRA permit (Ref. 10). According to the EPA Toxic Release Inventory System (TRIS) database, Photocircuits does release several chemicals into the air and transfers several chemicals to other sites (Ref. 11 p. 2). The chemicals released into the air include Chlorine, Hydrochloric Acid, Sulfuric Acid, and Toluene (Ref. 11, p. 3). They also dispose of 579,542 lbs. of copper compound and 1,611lbs of lead compounds to other sites (Ref. 11, p. 2).

GENERAL INFORMATION (continued)

SITE SKETCH: Provide a sketch of the site. Indicate the pertinent features of the site and nearby environments including sources of wastes, areas of visible and buried wastes, buildings, residences, access roads, parking areas, fences, fields, drainage patterns, water bodies, vegetation, wells, sensitive environments, and other features.



GENERAL INFORMATION (continued)

Source Descriptions: Describe all sources at the site. Identify source type and relate to waste disposal operations. Provide source dimensions and the best available waste quantity information. Describe the condition of sources and all containment structures. Cite references.

SOURCE TYPES

Landfill: A man-made (by excavation or construction) or natural hole in the ground into which wastes have come to be disposed by backfilling, or by contemporaneous soil deposition with waste disposal.

Surface Impoundment: A natural topographic depression, man-made excavation, or diked area, primarily formed from earthen materials (lined or unlined) and designed to hold an accumulation of liquid wastes, wastes containing free liquids, or sludges not backfilled or otherwise covered; depression may be wet with exposed liquid or dry if deposited liquid has evaporated, volatilized or leached; structures that may be described as lagoon, pond, aeration pit, settling point, tailings point, sludge pit; also a surface impoundment that has been covered with soil after the final deposition of waste materials (i.e., buried or backfilled).

Drum: A potable container designed to hold a standard 55-gallon volume of wastes.

Tank and Non-Drum Container: Any device, other than a drum, designed to contain an accumulation of waste that provides structural and its constructed primarily of fabricated materials (such as wood, concrete, steel, or plastic); any portable or mobile device in which waste is stored or otherwise handled.

Contaminated Soil: An area or volume of soil onto which hazardous substances have been spilled, spread, disposed, or deposited.

Pile: Any non-containerized accumulation above the ground surface of solid, non-flowing waste; includes open dumps. Some types of waste piles are:

- Chemical Waste Pile: A pile consisting primarily of discarded chemical products, by-products, radioactive wastes, or used or unused feedstocks.
- Scrap Metal or Junk Pile: A pile consisting primarily of scrap metal or discarded durable goods (such as appliances, automobiles, auto parts, batteries, etc.) composed of materials containing hazardous substances.
- Tailing pile: A pile consisting primarily of any combination of overburden from a mining operation and tailings from a mineral mining, benenficiation, or processing operation.
- Trash Pile: A pile consisting primarily of paper, garbage, or discarded non-durable goods containing hazardous substances.

Land Treatment: Landfarming or other method of waste management in which liquid wastes or sludges are spread over land and tilled, or liquids are injected at shallow depths into soils.

Other: Sources not in categories listed above.

GENERAL INFORMATION (continued)

Source Description: Include description of containment per pathway for ground water (see HRS Table 3-2), surface water (see HRS Table 4-2), and air (see HRS Tables 6-3 and 6-9). All identified source materials are manifested off site for proper disposal (Refs. 2 p. 4, 14).

Source: Cupric Chloride Solution (Copper) Source Type: Tanks

This waste is generated from etching and plating operations. The cupric chloride solution is stored in two interconnected fiberglass above ground storage tanks (2,500 gallons and 5,000 gallons), which are equipped with secondary containment although the feed pipes are not. The site generates an estimated 54,000 gallons per year (Ref.12).

Source: Wastewater Treatment Sludge (F006) Source Type: Other

Wastewater treatment sludge from electroplating operations is generated at 236 tons a year and is stored in large plastic bags in the F006 storage area at the rear or western end of the building on a storage pad made of concrete with curbs and fencing surrounding it (Ref. 2, p. 4, 15). It is assumed this sludge material contains heavy metals associated with electroplating (nickel, zinc, and lead). Waste waters also use acids to adjust Ph (Hydrochloric acid, nitric acid and sulfuric acid).

Source: Rolled Solder Flux (Lead) (D008) Source Type: Drums

The spent solder flux is placed in 55-gallon drums and stored at the F006 storage pad where it is manifested in less-than-90-day intervals to an off-site facility (Ref. 2, p. 4). The TRIS report reports 250 pounds of lead is taken off site to a waste facility (Ref. 14).

Source: 1,1,1-trichloroethane (F001) Source Type: Drums

Only one 55-gallon drum of this vapor degreaser is generated a year (Ref. 2 p. 5).

Hazardous Waste Quantity (HWQ) Calculations: SI Table 1 and 2 (See HRS Tables 2-5, 2-6 and 5-2).

Since all generated hazardous waste is manifested off site, waste calculations were determined based on volume of source containers (tanks), or by the total annual waste generated.

7,500 gallons of CuCl solution ÷ 500 (Multiple source divisor for tanks) = 15

236 yd^3 of wastewater sludge ÷ 2.5(Multiple source divisor for other) = 94.4

2 drums of lead and 1,1,1-trichloroethane ÷ 10 (Multiple source divisor for drums) = 0.2

The total source waste quantity is 109.6, which results in a HWQ value of 100 (see SI Table 2).

Sources: 2, 12, 13

Attach additional pages, if necessary HWQ = 100

SI TABLE 1: HAZARDOUS WASTE QUANTITY (HWQ) SCORES FOR SINGLE SOURCE SITES AND FORMULAS FOR MULTIPLE SOURCE SITES (HRS Table 2-5)

		Single Source Sites (assigned HWQ scores)				Multiple Source Sites		
(Column 1) TIER	(Column 2) Source Type	(Column 3) HWQ = 10	(Column 4) HWQ = 100	(Column 5) HWQ = 10,000	(Column 6) HWQ = 100,000	(Column 7) Divisors for Assigning Source WQ Values	(Column 2) Source Type	(Column 1) TIER
A Hazardous Constituent Quantity	N/A	HWQ = 1 if Hazardous Constituent Quantity data are complete HWQ = 10 if Hazardous Constituent Quantity data are not complete	>100 to 10,000 lbs.	>10,000 to 1 million lbs.	>1 million lbs.	lbs ÷ 1	N/A	A Hazardous Constituent Quantity
B Hazardous Wastestream Quantity	N/A	≤500,000 lbs	>500,000 to 50 million lbs.	>50 million to 5 billion lbs.	>5 billion lbs	lbs ÷ 5,000	N/A	B Hazardous Wastestream Quantity
C Volume	Landfill	≤6.75 million ft^3 ≤250,000 yd^3	>6.75 million to 675 million ft^3 >250,000 to 25 million yd^3	>675 million to 67.5 billion ft^3 >25 million to 2.5 billion yd^3	>67.5 billion ft^3 >2.5 billion yd^3	ft^3 ÷ 67,500 yd^3 ÷ 2,500	Landfill	C Volume
	Surface impoundment	≤6,750 ft^3 ≤250 yd^3	>6,750 to 675,000 ft^3 >250 to 25,000 yd^3	>675,000 to 67.5 million ft^3 >25,000 to 2.5 million yd^3	>67.5 million ft^3 >2.5 million yd^3	ft^3 ÷ 67.5 yd^3 ÷ 2.5	Surface impoundment	
	Drums	≤1,000 drums	>1,000 to 100,000 drums	>100,000 to 10 million drums	>10 million drums	Drums ÷ 10	Drums	
	Tanks and non-drum containers	≤50,000 gallons	>50,000 to 5 million gallons	>5 million to 500 million gallons	>500 million gallons	Gallons ÷ 500	Tanks and non-drum containers	
	Contaminated soil	≤6.75 million ft^3 ≤250,000 yd^3	>6.75 million to 675 million ft^3 >250,000 to 25 million yd^3	>675 million to 67.5 billion ft^3 >25 million to 2.5 billion yd^3	>67.5 billion ft^3 >2.5 billion yd^3	ft^3 ÷ 67,500 yd^3 ÷ 2,500	Contaminated soil	
	Pile	≤6,750 ft^3 ≤250 yd	>6,750 to 675,000 ft^3 >250 to 25,000 yd^3	>675,000 to 67.5 million ft^3 >25,000 to 2.5 million yd^3	>67.5 million ft^3 >2.5 million yd^3	ft^3 ÷ 67.5 yd^3 ÷ 2.5	Pile	
	Other	≤6,750 ft^3 ≤250 yd^3	>6,750 to 675,000 ft^3 >250 to 25,000 yd^3	>675,000 to 67.5 million ft^3 >25,000 to 2.5 million yd^3	>67.5 million ft^3 >2.5 million yd^3	ft^3 ÷ 67.5 yd^3 ÷ 2.5	Other	

SI TABLE 1: HAZARDOUS WASTE QUANTITY (HWQ) SCORES FOR SINGLE SOURCE SITES AND FORMULAS FOR MULTIPLE SOURCE SITES (HRS Table 2-5)

		Single Source Sites (assigned HWQ scores)				Multiple Source Sites		
(Column 1) TIER	(Column 2) Source Type	(Column 3) HWQ = 10	(Column 4) HWQ = 100	(Column 5) HWQ = 10,000	(Column 6) HWQ = 100,000	(Column 7) Divisors for Assigning Source WQ Values	(Column 2) Source Type	(Column 1) TIER
	Landfill	≤340,000 ft^2 ≤7.8 acres	>340,000 to 34 million ft^2 >7.8 to 780 acres	>34 million to 3.4 billion ft^2 >780 to 78,000 acres	>3.4 billion ft^2 >78,000 acres	ft^2 ÷ 3,400 acres ÷ 0.078	Landfill	
	Surface Impoundment	≤1,300 ft^2 ≤0.029 acres	>1,300 to 130,000 ft^2 >0.029 to 2.9 acres	>130,000 to 13 million ft^2 >2.9 to 290 acres	>13 million ft^2 >290 acres	ft^2 ÷ 13 acres ÷ 0.00029	Surface impoundment	
D Area	Contaminated soil	≤3.4 million ft^2 ≤78 acres	>3.4 million to 340 million ft^2 >78 to 7,800 acres	>340 million to 34 billion ft^2 >780 to 78,000 acres	>34 billion ft^2 >78,000 acres	ft^2 ÷ 34,000 acres ÷ 0.78	Contaminated soil	D Area
	Pile (Tailings)	≤1,300 ft^2 ≤0.029 acres	>1,300 to 130,000 ft^2 >0.029 tp 2.9 acres	>130,000 to 13 million ft^2 >2.9 to 290 acres	>13 million ft^2 >290 acres	ft^2 ÷ 13 acres ÷ 0.00029	Pile	
	Land treatment	≤27,000 ft^2 ≤0.62 acres	>27,000 to 2.7 million ft^2 >0.62 to 62 acres	>2.7 million to 270 million ft^2 >62 to 6,200 acres	>270 million ft^2 >6,200 acres	ft^2 ÷ 270 acres ÷ 0.0062	Land treatment	

1 ton = 2,000 pounds = 1 cubic yard = 4 drums = 200 gallons

HAZARDOUS WASTE QUANTITY (HWQ) CALCULATION

For each migration pathway, evaluate HWQ associated with sources that are available (i.e., incompletely contained) to migrate to the pathway. (Note: If Actual Contamination Targets exist for ground water, surface water, or air migration pathways, assign the calculated HWQ score of 100, whichever is greater, as the HWQ score for the pathway.) For each source, evaluate HWQ for one or more of the four tiers SI Table 1, HRS Table 2-5) for which data exist: constituent quantity, wastestream quantity, source volume, and source area. Select the tier that gives the highest value as the source HWQ. Select the source volume HWQ rather than source area HWQ if data for both tiers are available.

Column 1 of SI Table 1 indicates the quantity tier. Column 2 lists source types for the four tiers. Columns 3, 4, 5 and 6 provide ranges of waste amount for sites with only one source corresponding to HWQ scores at the tops of the columns. Column 7 provides formulas to obtain source waste quantity values at sites with multiple sources.

1. Identify each source type.
2. Examine all waste quantity data available for each source. Record constituent quantity and waste stream mass or volume. Record dimensions of each source.
3. Convert source measurements to appropriate units for each tier to be evaluated.
4. For each source use the formulas in the last column of SI Table 1 to determine the waste quantity value for each tier that can be evaluated. Use the waste quantity value obtained from the highest tier as the quantity value for the source.
5. Sum the values assigned to each source to determine the total site waste quantity.
6. Assign HWQ score from SI Table 2 (HRS Table 2-6).

Note these exceptions to evaluate soil exposure pathway HWQ (see HRS Table 5-2):

- The divisor for the area (square feet) of a landfill is 34,000.
- The divisor for the area (square feet) of a pile is 34.
- Wet surface impoundments and tanks and non-drum containers are the only sources for which volume measurements are evaluated for the soil exposure pathway.

SI TABLE 2: HWQ SCORES FOR SITES

Site WQ Total	HWQ Score
0	0
1[a] to 100	1[b]
>100 to 10,000	100
>10,000 to 1 million	10,000
>1 million	1,000,000

[a] If the WQ total is between 0 and 1, round it to 1.
[b] If the hazardous constituent quantity data are not complete, assign the score of 10.

SI Table 3: Waste Characterization Worksheet

CONFIDENTIAL

SITE NAME: Photocircuits Atlanta, Inc.

REFERENCES: 2, 14
Preliminary Assessment, Superfund Chemical Data Matrix

SOURCES:
1 Spent Cupric Chloride Solution (D002)
2 Wastewater Treatment Sludge (F006)
3 Rolled Solder Flux (D008)
4 Spent Solvents (F001)

Source Number	Hazardous Substance	Toxicity (Tox)	Ground Water Pathway: Mobility (Mob)	Ground Water Pathway: Tox / Mob Value	Surface Water Pathway – Overland/Flood Migration: Persistence (Per) Lake	Tox/Per	FC Bioaccumulation (Bio) Potential	Tox/ Per/ Bio	Ecotoxicity (Eco) Fresh	Eco/ Per	Eco/Per/ Bio(env)	Surface Water Pathway – Groundwater to Surface Water: Tox/Mob/ Per	Tox/Mob/ Per/Bio	Eco/Mob/ Per	Eco/Mob/ Per/Bio	Air Pathway – Tox./Mob.: Gas	Particulate (.0002)
1	Copper	0	0.01	0	1	0	50,000	0	100	100	5,000,000	0.0E+00	0.0E+00	1.0E+00	5.0E+04	no	0.0
2	Hydrochloric acid	100	1	100	0.07	7	0.5	4	1	0	0	7.0E+00	3.5E+00	7.0E-02	3.5E-02	yes	0.0
4	1,1,1 trichloroethan	1	1	1	1	1	5	5	10	10	50	1.0E+00	5.0E+00	1.0E+01	5.0E+01	yes	0.0
2,3	Lead	10,000	0.01	100	1	10,000	50	500,000	1,000	1,000	5,000,000	1.0E+02	5.0E+03	1.0E+01	5.0E+02	no	2.0
2	Nitric Acid	10	1	10	0.07	1	0.5	0	0	0	0	7.0E-01	3.5E-01	0.0E+00	0.0E+00	yes	0.0
2	Sulfuric Acid	1,000	1	1,000	0.07	70	0.5	35	10	1	0	7.0E+01	3.5E+01	7.0E-01	3.5E-01	yes	0.2
2	Toluene	10	1	10	0.4	4	50	200	100	40	2,000	4.0E+00	2.0E+02	4.0E+01	2.0E+03	yes	0.0
2	Nickel	10,000	0.01	100	1	10,000	1	5,000	10	10	5,000	1.0E+02	5.0E+01	1.0E-01	5.0E-02	no	2.0
2	Zinc	10	0.01	0	1	10	500	5,000	10	10	100	1.0E-01	5.0E+01	1.0E-01	5.0E+01	no	0.0
				0		0		0		0	0	0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0
				0		0		0		0	0	0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0
				0		0		0		0	0	0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0
				0		0		0		0	0	0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0
				0		0		0		0	0	0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0

Ground Water Observed Release Substances Summary Table

On SI Table 4, list the hazardous substances associated with the site detected in ground water samples for that aquifer. Include only those substances directly observed or with concentrations significantly greater than background levels. Obtain toxicity values from the Superfund Chemical Data Matrix (SCDM). Assign mobility a value of 1 for all observed release substances regardless of the aquifer being evaluated. For each substance, multiply the toxicity by the mobility to obtain the toxicity/mobility factor value; enter the highest toxicity/mobility value for the aquifer in the space provided.

Ground Water Actual Contamination Targets Summary Table

If there is an observed release at a drinking water well, enter each hazardous substance meeting the requirements for an observed release by well and sample ID on SI Table 5 and record the detected concentration. Obtain benchmark, cancer risk, and reference dose concentrations from SCDM. For MCL and MCLG benchmarks, determine the highest percentage of benchmark obtained for any substance. For cancer risk and reference dose, sum the percentages for the substances listed. If benchmark, cancer risk, or reference dose concentrations are not available for a particular substance, enter N/A for the percentage. If the highest benchmark percentage or the percentage sum calculated for cancer risk or reference does equals or exceeds 100%, evaluate the population using the well as a Level I target. If these percentages are less than 100% or all are N/A, evaluate the population using the well as a Level II target for that aquifer.

S TABLE 4: GROUND WATER OBSERVED RELEASE SUBSTANCE (BY AQUIFER)

Sample ID	Hazardous Substance	Bckgrd. Conc.	Toxicity/ Mobility	References
		Highest Toxicity/Mobility		

SI TABLE 5: GROUND WATER ACTUAL CONTAMINATION TARGETS

Well ID: _____Level I_____Level II_____Population Served_____References_____

Sample ID	Hazardous Substance	Conc. (µg/L)	Benchmark Conc. (MCL or MCLG)	% of Benchmark	Cancer Risk Conc.	% of Cancer Risk Conc.	RfD	% of RfD
			Highest Percent		Sum of Percents		Sum of Percents	

GROUND WATER PATHWAY
GROUND WATER USE DESCRIPTION

Describe Ground Water Use within 4 miles of the Site:
Describe generalized stratigraphy, aquifers, municipal and private wells References 2, 15, 16, 17, 18

Fayette County is located in the Greenville Slope physiographic province of the Piedmont geologic region (Ref. 15). The Piedmont is a region of moderate-to-high-grade metamorphic rocks, such as schists, amphibolites, gneisses and migmatites and igneous rock like granite. Isolated granitic plutons also rise above the Piedmont landscape to reveal prominent features such as Stone Mountain. Piedmont soils are commonly red due to khandite-group clays and iron oxides present from the intense weathering of feldspar-rich igneous and metamorphic rock (Ref 16).
Groundwater is difficult to find because it flows along faults and fractures but is often locally abundant in the Piedmont (Ref 16). Groundwater in the Fayette County area is confined to joints, fractures, and contact zones in the crystalline rocks, and pore spaces in the saprolite and alluvium (Ref. 2, p. 10). The only major hydrogeologic units present in Fayette County are Crystalline-rock aquifers (Ref. 17). Groundwater is transmitted through secondary openings along fractures, foliation, joints, contacts or other features in the crystalline bedrock consisting of granite, gneiss, schist, and quartzite. These aquifers are not laterally extensive as the storage is in the regolith and fractures. Because of this, the hydrology of the Crystalline-rock aquifers is not well understood. Wells penetrating in to the Crystalline-rock aquifers are present throughout Georgia; but in Piedmont, the surficial aquifers consist of soil, saprolite, stream alluvium, colluvium, and other surficial deposits (Ref. 18).
Three wells are located within the four mile radius. Loghouse well, Willowbend well, and Shoal Creek well. The Loghouse and Willowbend wells are located in Fayette County and contribute to the water system. The Shoal Creek Well is located in Coweta County and contributes only to Shoal Creek Subdivision.

Show Calculations of Ground Water Drinking Water Populations for each Aquifer:
Provide apportionment calculations for blended supply systems.

State average number of persons per household: 2.63 Reference 1, 19, 20, 21, 22, 23, 26
The Fayette County Water System has five wells which contribute 4.6% of the water to the system. The system serves 51,457 people so the wells serve 2,367 of them which divided by the 5 wells equals 473 people served by each well. Shoal Creek well provides local residents of Shoal Creek Subdivision, which is comprised of 131 houses x 2.63 = 345 people.
Crystalline-Rock Aquifer

473 residents are groundwater targets within the first mile radius.
0 residents are groundwater targets within the 1-2 mile radius.
473 residents are groundwater targets within the 2-3 mile radius.
345 residents are groundwater targets within the 3-4 mile radius.

A total of 1291 residents are potential groundwater receptors located within 4 miles of Photocircuits.

GROUND WATER PATHWAY WORKSHEET

LIKELIHOOD OF RELEASE	Score	Data Type	Refs
1. OBSERVED RELEASE: If sampling data or direct observation support a release to the aquifer, assign a score of 550. Record observed release substances on SI Table 4.	0		
2. POTENTIAL TO RELEASE: Depth to aquifer: >70 feet. If sampling data does not support a release to the aquifer, and the site is in karst terrain or the depth to aquifer is 70 feet or less, assign a score of 500; otherwise, assign a score of 340. Optionally, evaluate potential to release according the HRS Section 3.	340		24
LR=	340		

TARGETS

Are any wells part of a blended system? Yes__X__ No_____ If yes, attach a page to show apportionment calculations.			
3. ACTUAL CONTAMINATION TARGETS: If analytical evidence indicates that any target drinking water well for the aquifer has been exposed to a hazardous substance from the site, evaluate the factor score for the number of people served (SI Table 5). Level I: _____people x 10 = _____ Level II:_____people x 1 = _____ **Total =**	0		20, 23
4. POTENTIAL CONTAMINATION TARGETS: Determine the number of people served by drinking water wells for the aquifer or overlying aquifers that are not exposed to a hazardous substance from the site; record the population for each distance category in SI Table 6a or 6b. Sum the population values and multiply by 0.1.	27.7		1,20, 21, 23
5. NEAREST WELL: Assign a score of 50 for any Level I Actual Contamination Targets for the aquifer or overlying aquifer. Assign a score of 45 if there are Level II targets but no Level I targets. If no Actual Contamination Targets exist, assign the Nearest Well score from SI Table 6a or 6b. If no drinking water wells exist within 4 miles, assign 0.	9		
6. WELLHEAD PROTECTION AREA (WHPA): If any source lies within or above a WHPA for the aquifer, or if a ground water observed release has occurred within a WHPA, assign a score of 20; assign 5 if neither condition applies but a WHPA is within 4 miles, otherwise assign 0.	0		
7. RESOURCES: Assign a score of 5 if one or more ground water resource applies; assign 0 if none applies. • Irrigation (5 acre minimum) of commercial food crops or commercial forage crops • Watering of commercial livestock • Ingredient in commercial food preparation • Supply for commercial aquaculture • Supply for a major or designated water recreation area, excluding drinking water use	0		
SUM OF TARGETS T=	36.7		

SI TABLE 6 (From HRS TABLE 3-12): VALUES FOR POTENTIAL CONTAMINATION GROUNDWATER TARTET POPULATIONS

SI TABLE 6a: OTHER THAN KARST AQUIFERS

Distance from site	Pop.	Nearest well (choose highest)	Population Served by Wells within Distance Category												
			1 to 10	11 to 30	31 to 100	101 to 300	301 to 1000	1001 to 3000	3001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	300,001 to 1,000,000	1,000,001 to 3,000,000	Pop. Value	Ref.
0 to 1/4 mile		20	4	17	53	164	522	1,633	5,214	16,325	52,137	163,246	521,360	1,632,455		
>1/4 to 1/2 mile		18	2	11	33	102	324	1,013	3,233	10,122	32,325	101,213	323,243	1,012,122		
>1/2 to 1 mile	473	9	1	5	17	52	167	523	1,669	5,224	16,684	52,239	166,835	522,385	167	1, 20, 23
> 1 to 2 miles		5	0.7	3	10	30	94	294	939	2,939	9,385	29,384	93,845	293,842		
>2 to 3 miles	473	3	0.5	2	7	21	68	212	678	2,122	6,778	21,222	67,777	212,219	68	1, 20, 23
>3 to 4 miles	365	2	0.3	1	4	13	42	131	417	1,306	4,171	13,060	41,709	130,596	42	1, 20, 23
Nearest Well =		9												**SUM =**	277	

SI TABLE 6 (From HRS TABLE 3-12): VALUES FOR POTENTIAL CONTAMINATION GROUND WATER TARGET POPULATIONS (continued)

SI Table 6b: Karst Aquifers

Distance from site	Pop.	Nearest well (choose highest)	Population Served by Wells within Distance Category												
			1 to 10	11 to 30	31 to 100	101 to 300	301 to 1000	1001 to 3000	3001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	300,001 to 1,000,000	1,000,001 to 3,000,000	Pop. Value	Ref.
0 to 1/4 mile		20	4	17	53	164	522	1,633	5,214	16,325	52,137	163,246	521,360	1,632,455		
>1/4 to 1/2 mile		20	2	11	33	102	324	1,013	3,233	10,122	32,325	101,213	323,243	1,012,122		
>1/2 to 1 mile		20	2	9	26	82	261	817	2,607	8,163	26,068	81,523	260,680	816,227		
> 1 to 2 miles		20	2	9	26	82	261	817	2,607	8,163	26,068	81,523	260,680	816,227		
>2 to 3 miles		20	2	9	26	82	261	817	2,607	8,163	26,068	81,523	260,680	816,227		
>3 to 4 miles		20	2	9	26	82	261	817	2,607	8,163	26,068	81,523	260,680	816,227		
Nearest Well =														**SUM =**		

GROUND WATER PATHWAY WORKSHEET (concluded)

WASTE CHARACTERISTICS	Score	Data Type	Does Not Apply
8. If any Actual Contamination Targets exist for the aquifer or overlying aquifers, assign the calculated hazardous waste quantity score or a score of 100, whichever is greater; if no Actual Contamination Targets exist, assign the hazardous waste quantity score calculated for sources available to migrate to ground water.	100		
9. Assign the highest ground water toxicity/mobility value from SI Table 3 or 4. Sulfuric Acid	1,000		
10. Multiply the ground water toxicity/mobility and hazardous waste quantity scores. Assign the Waste Characteristics score from the table below: (from HRS Table 2-7)	WC = 18		
WC =	18		

Product	WC Score
0	0
>0 to < 10	1
10 to < 100	2
100 to <1,000	3
1,000 to < 10,000	6
10,000 to < 1E + 05	10
1E + 05 to < 1E + 06	18
1E + 06 to < 1E + 07	32
1E + 07 to < 1E + 08	56
1E + 08 or greater	100

Multiply LR by T and by WC. Divide the product by 82,500 to obtain the ground water pathway score for each aquifer. Select the highest aquifer score. If the pathway score is greater than 100, assign 100.

GROUND WATER PATHWAY SCORE: $\frac{\text{LR X T X W}}{\text{82,500}}$

LR = 340
T = 36.7
WC = 18

$$\frac{340 \times 36.7 \times 18}{82{,}500}$$

$$\frac{224{,}604}{82{,}500}$$

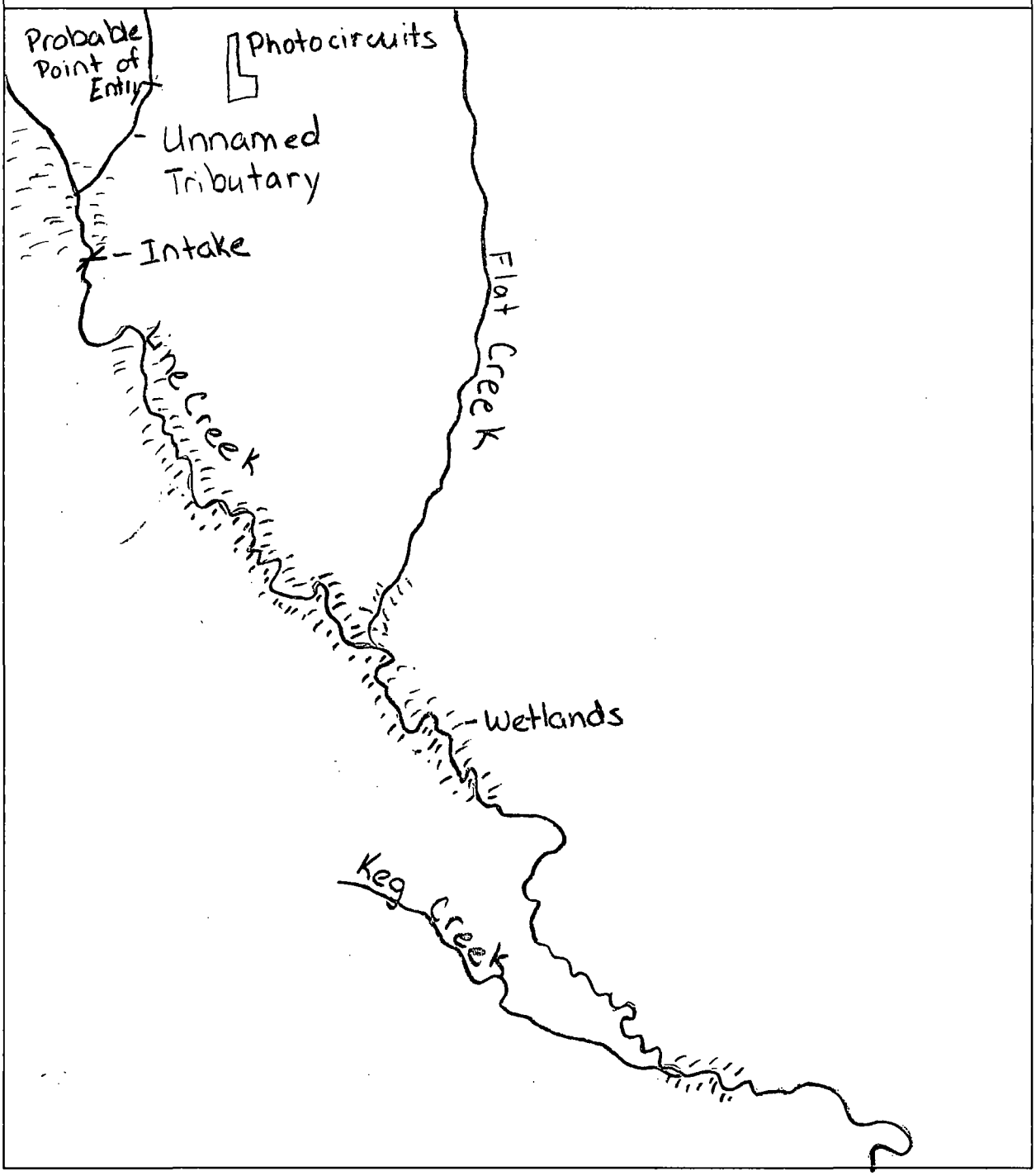
2.72

(Maximum of 100)

2.72

SURFACE WATER PATHWAY

Sketch of the Surface Water Migration Route:
Label all surface water bodies. Include runoff route and drainage direction, probable point of entry, and 15-mile target distance limit. Mark sample locations, intakes, fisheries, and sensitive environments. Indicate flow directions, tidal influence, and rate. (Reference 27)



SURFACE WATER PATHWAY

Surface Water Observed Release Substances Summary Table

On SI Table 7, list the hazardous substances detected in samples for the watershed, which can be attributed to the site. Include only those substances in observed releases (direct observation) or with concentration levels significantly above background levels. Obtain toxicity, persistence, bioaccumulation potential, and ecotoxicity values from SCDM. Enter the highest toxicity/persistence, toxicity/persistence/bioaccumulation, and ecotoxicity/persistence/ecobioaccumulation values in the spaces provided.

- TP = Toxicity x Persistence
- TPB = TP x Bioaccumulation
- EP = Ecotoxicity x Persistence
- ETPB = EP x Bioaccumulation

Drinking Water Actual Contamination Targets Summary Table

For an observed release at or beyond a drinking water intake, on SI Table 8 enter each hazardous substance by sample ID and the detected concentration. For surface water sediment samples detecting a hazardous substance at or beyond an intake, evaluate the intake as Level II contamination. Obtain benchmark, cancer risk, and reference dose concentrations for each substance from SCDM. For MCL and MCLG benchmarks, determine the highest percentage of benchmark obtained for any substance. For cancer risk and reference dose, sum the percentages of the substances listed. If benchmark, cancer risk, or reference dose concentrations are not available for a particular substance, enter N/A for the percentage. If the highest benchmark percentage or the percentage sum calculated for cancer risk or reference dose equals or exceeds 100%, evaluate the population served by the intake as a Level I target. If the percentages are less than 100%, or all are N/A, evaluate the population served by the intake as a Level II target.

SI TABLE 7: SURFACE WATER OBSERVED RELEASE SUBSTANCES

SAMPLE ID	HAZARDOUS SUBSTANCE	CONCENTRATION	BKG / CONTROL CONCENTRATIONS	TOXICITY/ PERSISTENCE	TOXICITY/PERSIS/ BIOACCUM.	ECOTOXICITY/ PERSIS/ ECOBIOACCUM	REFERENCES
			HIGHEST VALUES				

SI TABLE 8: SURFACE WATER DRIKING WATER ACTUAL CONTAMINATION TARGETS

Intake ID:_____ Sample Type:_____ Level I ____ Level II Population Served _____ References:

SAMPLE ID	HAZARDOUS SUBSTANCE	CONCENTRATION (µ/L)	BENCHMARK CONC. (MCL OR MCLG)	% OF BENCHMARK	CANCER RISK CONC.	% OF CANCER RISK CONC.	RfD	% OF RfD
			HIGHEST PERCENT		SUM OF PERCENTS		SUM OF PERCENTS	

Intake ID:_____ Sample Type:_____ Level I ____ Level II Population Served _____ References:

SAMPLE ID	HAZARDOUS SUBSTANCE	CONCENTRATION (µ/L)	BENCHMARK CONC. (MCL OR MCLG)	% OF BENCHMARK	CANCER RISK CONC.	% OF CANCER RISK CONC.	RfD	% OF RfD
			HIGHEST PERCENT		SUM OF PERCENTS		SUM OF PERCENTS	

TABLE 4-1
SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET

FACTOR CATEGORIES AND FACTORS	MAXIMUM VALUE	VALUE ASSIGNED
DRINKING WATER THREAT		
Likelihood of Release		
1. Observed release	550	_____
2. Potential to release by Overland flow		
2a. Containment	10	
2b. Runoff	25	
2c. Distance to Surface Water	25	
2d. Potential to Release by Overland Flow (Lines 2a x [2b + 2c])	500	
3. Potential to Release by Flood	500	
3a. Containment (Flood)	10	
3b. Flood Frequency	50	
3c. Potential to Release by Flood (Lines 3a x 3b)	500	
4. Potential to Release (Lines 2d + 2c, subject to a maximum of 500)	500	
5. Likelihood of Release (Higher of lines 1 and 4)	550	

Table 4-2 – Containment Factor Values (see Supplemental Tables - if needed)

TABLE 4-3
DRAINAGE AREA VALUES

Drainage Area (acres)	Assigned Value
Less than 50	1
50 to 250	2
>250 to 1,000	3
>1,000	4

TABLE 4-4
SOIL GROUP DESIGNATIONS

Surface Soil Description	Soil Group Designation
Coarse-textured soils with high infiltration rates (For example, sands, loamy sands)	A
Medium-textured soils with moderate infiltration rates (For example, sandy loams, loams)	B
Moderately fine-textured soils with low infiltration rates (For example, silty loams, silts, sandy clay loams)	C
Fine-textured soils with very low infiltration rates (For example, clays, sandy clays, silty clay loams, clay loams, silty clays); or impermeable surfaces (For example, pavement)	D

LIKELIHOOD OF RELEASE -- OVERLAND/FLOOD MIGRATION	SCORE	REFS
1. OBSERVED RELEASE: If sampling data or direct observation support a release to surface water in the watershed, assign a score of 550. Record observed release substances on SI Table 7		
2. POTENTIAL TO RELEASE: Distance to surface water: 1000 (Feet). If sampling data does not support a release to surface water in the watershed, use the table below to assign a score from the table below based on distance to surface water and flood frequency.	500	1, 2 p. 8
Optionally, evaluate surface water potential to release according to HRS Section 4.1.2.1.2		
LR =	500	

Distance to surface water <2500 feet	500
Distance to surface water >2500 feet, and:	
Site in annual or 10-yr floodplain	500
Site in 100-yr floodplain	400
Site in 500-yr floodplain	300
Site outside 500-yr floodplain	100

LIKELIHOOD OF RELEASE -- GROUNDWATER TO SURFACE WATER MIGRATION	SCORE	REFS
1. OBSERVED RELEASE: If sampling data or direct observation support a release to surface water in the watershed, assign a score of 550. Record observed release substances on SI Table 7 NOTE: Evaluate groundwater to surface water migration only for a surface water body that meets all of the following conditions: 1. A portion of the surface water is within 1 mile of site sources having a containment factor greater than 0. 2. No aquifer discontinuity is established between the source and the above portion of the surface water body. 3. The top of the uppermost aquifer is at or above the bottom of the surface water. Elevation of top of uppermost aquifer: _____ Elevation of bottom of surface water body: _____	N/E	
2. POTENTIAL TO RELEASE: Use the ground water potential to release. Optionally, evaluate surface water potential to release according to HRS Section 3.1.2.		
LR =		

SURFACE WATER PATHWAY
LIKELIHOOD OF RELEASE AND DRINKING WATER THREAT WORKSHEET (CONTINUED)

DRINKING WATER THREAT TARGETS	SCORE	REFS
Record the water body type, flow, and number of people served by each drinking water intake within the target distance limit in the watershed. If there is no drinking water intake within the target distance limit, assign 0 to factors 3, 4, and 5.		

Intake Name	Water Body Type	Flow	People Served
Line Creek	River	10 to 100	566

Are any intakes part of a blended system? Yes __X__ No
The FCWS is a blended system that serves 51,457 people and provides 3,149,768,729 gallons per year within Fayette County. The Line Creek intake provides 34,092,000 gallons of water per year to the FCWS or 1.1 percent of the total water contribution. A population of 566 was determined to be served by Line Creek.

Ref. 20, 23, 24

3. ACTUAL CONTAMINATION TARGETS: If analytical evidence indicates a drinking water intake has been exposed to a hazardous substance from the site, list the intake name and evaluate the factor score for the drinking water population (SI Table 8).

_____

Level I: _____ people x 10 = _____
Level II: _____ people x 1 = _____ Total =

4. POTENTIAL CONTAMINATION TARGETS: Determine the number of people served by drinking water intakes for the watershed that have not been exposed to a hazardous substance from the site. Assign the population values from SI Table 9. Sum the values and multiply by 0.1.	5.2	
5. NEAREST INTAKE: Assign a score of 50 for any Level I Actual Contamination Drinking Water Targets for the watershed. Assign a score of 45 if there are Level II targets for the watershed, but no Level I targets. If no Actual Contamination Drinking Water Targets exist, assign a score for the intake nearest the PPE from SI Table 9. If no drinking water intakes exist, assign 0.	2	
6. RESOURCES: Assign a score of 5 if one or more surface water resource applies; assign 0 if none applies. • Irrigation (5 acre minimum) of commercial food or commercial forage crops • Watering of commercial livestock • Ingredient in commercial food preparation • Major or designated water recreation area, excluding drinking water use	0	
SUM OF TARGETS T =	7.2	

SI TABLE 9 (FROM HRS TABLE 4-14): DILUTION-WEIGHTED POPULATION VALUES FOR POTENTIAL CONTAMINATION FOR SURFACE WATER MIGRATION PATHWAY

Type of Surface Water Body[b]	Pop.	Nearest Intake	Number of People[a]													Pop. Value
			0	1 to 10	11 to 30	31 to 100	101 to 300	301 to 1000	1001 to 3000	3001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	300,001 to 1,000,000	1,000,001 to 3,000,000	3,000,001 to 10,000,000	
Minimal Stream (<10 cfs)		20	0	4	17	53	164	522	1,633	5,214	16,325	52,137	163,246	521,360	1,632,455	5,213,590	
Small to moderate stream (10 to 100 cfs)	566	2	0	0.4	2	5	16	52	163	521	1,633	5,214	16,325	52,136	163,245	521,359	521
Moderate to large stream (>100 to 1,000 cfs)		0	0	0.04	0.2	0.5	2	5	16	52	163	521	1,633	5,214	16,325	52,136	
Large stream to river (>1,000 to 100,000 cfs)		0	0	0.004	0.02	0.05	0.2	0.5	2	5	16	52	163	521	1,632	5,214	
Large river (>10,000 to 100,000 cfs)		0	0	0	0.002	0.005	0.02	0.05	0.2	0.5	2	5	16	52	163	521	
Very large river (>100,000 cfs)		0	0	0	0	0.001	0.002	0.005	0.02	0.05	0.2	0.5	2	5	16	52	
Shallow ocean zone or Great Lake (Depth <20 feet)		0	0	0	0.002	0.005	0.02	0.05	0.2	0.5	2	5	16	52	163	521	
Moderate ocean zone or Great Lake (Depth 20 to 200 feet)		0	0	0	0	0.001	0.002	0.005	0.02	0.05	0.2	0.5	2	5	16	52	
Deep ocean zone or Great Lake (depth >200 feet)		0	0	0	0	0	0.001	0.003	0.008	0.03	0.08	0.3	1	3	8	26	
3-mile mixing zone in quiet flowing river (≥10 cfs)		10	0	2	9	26	82	261	817	2,607	8,163	26,068	81,623	260,680	816,227	2,606,795	
Nearest Intake =		2														Sum =	521

[a]Round the number of people to nearest integer. Do not round the assigned dilution-weighted population value to nearest integer.
[b]Treat each lake as a separate type of water body and assign it a dilution-weighted population value using the surface water body type with the same dilution weight from Table 4-13 as the lake. If drinking water is withdrawn from coastal tidal water or the ocean, assign a dilution-weighted population value to it using the surface water body type with the same dilution weight from Table 4-13 as the coastal tidal water or the ocean zone.

Refs. 1,20,23,24

SURFACE WATER PATHWAY

Human Food Chain Actual Contamination Targets Summary Table

On SI Table 10, list the hazardous substances detected in sediment, aqueous, sessile benthic organism tissue, or fish tissue samples (taken from fish caught within the boundaries of the observed release) by sample ID and concentration. Evaluate fisheries within the boundaries of observed release detected by sediment or aqueous samples as Level II, if at least one observed release substance has a bioaccumulation potential factor value of 500 or greater (See SI Table 7). Obtain benchmark, cancer risk, and reference dose concentrations from SCDM. For FDAAL benchmarks, determine the highest percentage of benchmark obtained for any substance. For cancer risk and reference dose, sum the percentage for the substances listed. If benchmark, cancer risk, or reference dose concentrations are not available for a particular substance, enter N/A for the percentage. If the highest benchmark percentage sum calculated for cancer risk or reference dose equals or exceeds 100%, evaluate this portion of the fishery as subject to Level I concentrations. If the percentages are less than 100% or all are N/A, evaluate the fishery as a Level II target.

Sensitive Environment Actual Contamination Targets Summary Table

On SI Table 11, list each hazardous substance detected in aqueous or sediment samples at or beyond wetlands or a surface water sensitive environment by sample ID. Record the concentration. If contaminated sediments or tissues are detected at or beyond a sensitive environment, evaluate the sensitive environment as Level II. Obtain benchmark concentrations from SCDM. For AWQC/AALAC benchmarks, determine the highest percentage of the benchmark of the substances detected in aqueous samples. If benchmark concentrations are not available for a particular substance, enter N/A for the percentage. If the highest benchmark percentage equals or exceeds 100%, evaluate that part of the sensitive environment subject to Level I concentrations. If the percentage is less than 100%, or all are N/A, evaluate the sensitive environment as Level II

SI TABLE 10: HUMAN FOOD CHAIN ACTUAL CONTAMINATION TARGETS FOR WATERSHED

Fishery ID:_____ Sample Type:_____ Level I ____ Level II_____ References:

Sample ID	Hazardous Substance	Concentration	Benchmark Concentration (FDAAL)	% of Benchmark	Cancer Risk Concentration	% of Cancer Risk Concentration	Reference Dose (RfD)	% of RfD
			HIGHEST PERCENT		SUM OF PERCENTS		SUM OF PERCENTS	

SI TABLE 11: SENSITIVE ENVIRONMENT ACTUAL CONTAMINATION TARGETS FOR WATERSHED

Environment ID:_____ Sample Type:_____ Level I ____ Level II ____ Environment Value:____

Sample ID	Hazardous Substance	Concentration	Benchmark Concentration (AWQC or AALAC)	% of Benchmark	References
			HIGHEST PERCENT		

Environment ID:_____ Sample Type:_____ Level I ____ Level II ____ Environment Value:____

Sample ID	Hazardous Substance	Concentration	Benchmark Concentration (AWQC or AALAC)	% of Benchmark	References
			HIGHEST PERCENT		

HUMAN FOOD CHAIN THREAT TARGETS	SCORE	REFS

Record the water body type and flow for each fishery within the target distance limit. If there is no fishery within the target distance limit, assign a score of 0 at the bottom of this page.

Fishery Name Line Creek Water Body River Flow 10-100 cfs Species _____ Production _____ Species _____ Production _____
Fishery Name _____ Water Body _____ Flow _____cfs Species _____ Production _____ Species _____ Production _____
Fishery Name _____ Water Body _____ Flow _____ cfs Species _____ Production _____ Species _____ Production _____

FOOD CHAIN INDIVIDUAL

7. ACTUAL CONTAMINATION FISHERIES:
If analytical evidence indicates that a fishery has been exposed to a hazardous substance with a bioaccumulation factor greater than or equal to 500 (SI Table 10), assign a score of 50 if there is a Level I fishery. Assign a 45 if there is a Level II fishery, but no Level I fishery.

8. POTENTIAL CONTAMINATION FISHERIES:
If there is a release of a substance with a bioaccumulation factor greater than or equal to 500 to a watershed containing fisheries within the target distance limit, but there are no Level I or Level II fisheries, assign a score of 20.

If there is no observed release to the watershed, assign a value for the potential contamination fisheries from the table below using the lowest flow at all fisheries within the target distance limit:

LOWEST FLOW	FCI VALUE
< 10 cfs	20
10 to 100 cfs	2
> 100cfs, coastal tidal waters, oceans, or Great Lakes	0
3-mile mixing zone in quiet flowing river	10

2

FCI VALUE = 2

SUM OF TARGETS T = 2

ENVIRONMENTAL THREAT WORKSHEET

When measuring length of wetlands that are located on both sides of a surface water body, sum both frontage lengths. For a sensitive environment that is more than one type, assign a value for each type.

ENVIRONMENTAL THREAT TARGETS | **SCORE** | **REFS**

Record the water body type and flow for each surface water sensitive environment within the target distance (See SI Table 12). If there is no sensitive environment within the target distance limit, assign a score of 0 at the bottom of the page.

Environment Name	Water Body Type	Flow
Wetlands	Line Creek	10 -100cfs
Habitat for state threatened Highscale Shiner	Line Creek	10 -100 cfs
		_____cfs

REFS: 26, 28

9. ACTUAL CONTAMINATION SENSITIVE ENVIRONMENTS: If sampling data or direct observation indicate any sensitive environment has been exposed to a hazardous substance from the site, record this information on SI Table 11, and assign a factor value for the environment (SI Tables 13 and 14).

Environment Name	Environment Type (SI Tables 13 & 14)	Environment Value	Multiplier 10 for level I 1 for Level II	Product
			Sum =	

10. POTENTIAL CONTAMINATION SENSITIVE ENVIRONMENTS:

Flow	Dilution Weight (SI Table 12)	Environment Type (SI Tables 13 & 14)	Environment Value	Potential Contaminant Multiplier	Product
10-100cfs	0.1	13 miles Wetlands	350	0.1	3.5
10-100cfs	0.1	State T and E Habitat	50	0.1	0.5
cfs				0.1	
cfs				0.1	
				Sum =	

SCORE: 4 | REFS: 1,27

SUM OF TARGETS T = 4

SI TABLE 12 (HRS TABLE 4-13):
SURFACE WATER DILUTION WEIGHTS

TYPE OF SURFACE WATER BODY		ASSIGNED DILUTION WEIGHT
DESCRIPTOR	**FLOW CHARACTERISTICS**	
Minimal stream	<10 cfs	1
Small to moderate stream	10 to 100 cfs	0.1
Moderate to large stream	>100 to 1,000 cfs	0.01
Large stream to river	>1,000 to 10,000 cfs	0.001
Large river	>10,000 to 100,000 cfs	0.0001
Very large river	>100,000 cfs	0.00001
Coastal tidal waters	Flow not applicable; depth not applicable	0.001
Shallow ocean zone or Great Lake	Flow not applicable; depth less than 20 feet	0.001
Moderate depth ocean or Great Lake	Flow not applicable; depth 20 to 200 feet	0.0001
Deep ocean zone or Great Lake	Flow not applicable; depth > 200 feet	0.000005
3-mile mixing zone in quiet flowing river	10 cfs or greater	0.5

SI TABLE 13 (HRS TABLE 4-23): SURFACE WATER AND AIR SENSITIVE ENVIRONMENTS VALUES

SENSITIVE ENVIRONMENT	ASSIGNED VALUE
Critical habitat for Federal designated endangered or threatened species Marine Sanctuary National Park Designated Federal Wilderness Area Ecologically important areas identified under the Coastal Zone Wilderness Act Sensitive Areas identified under the National Estuary Program or Near Coastal Water Program of the Clean Water Act Critical Areas identified under the Clean Lakes Program of the Clean Water Act (subareas in lakes or entire small lakes) National Monument (air pathway only) National Seashore Recreation Area National Lakeshore Recreation Area	100
Habitat known to be used by Federal designated or proposed endangered or threatened species National Preserve National or State Wildlife Refuge Unit of Coastal Barrier Resources System Coastal Barrier (undeveloped) Federal land designated for the protection of natural ecosystems Administratively Proposed Federal Wilderness Area Spawning areas critical for the maintenance of fish/shellfish species within a river system, bay, or estuary Migratory pathways and feeding areas critical for the maintenance of anadromous fish species within river reaches or areas in lakes or coastal tidal waters in which the fish spend extended periods of time Terrestrial areas utilized by large or dense aggregations of vertebrate animals (semi-aquatic foragers) for breeding National river reach designated as recreational	75
Habitat known to be used by State designated endangered or threatened species Habitat known to be used by a species under review as to its Federal endangered or threatened status Coastal Barrier (partially developed) Federally designated Scenic or Wild River	50
State land designated for wildlife or game management State designated Scenic or Wild River State designated Natural Area Particular areas, relatively small in size, important to maintenance of unique biotic communities	25
State designated areas for the protection of maintenance of aquatic life under the Clean Water Act	5
Wetlands See SI Table 14 (Surface Water Pathway) or SI Table 23 (Air Pathway)	

SI TABLE 14 (HRS TABLE 4-24): SURFACE WATER WETLANDS FRONTAGE VALUES

Total Length of Wetlands	Assigned Value
Less than 0.1 mile	0
0.1 to 1 mile	25
Greater than 1 to 2 miles	50
Greater than 2 to 3 miles	75
Greater than 3 to 4 miles	100
Greater than 4 to 8 miles	150
Greater than 8 to 12 miles	250
Greater than 12 to 16 miles	350
Greater than 16 to 20 miles	450
Greater than 20 miles	500

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SURFACE WATR PATHWAY (CONCLUDED)
WASTE CHARACTERISTICS, THREAT, AND PATHWAY SCORE SUMMARY

WASTE CHARACTERISTICS SCORE

14. If an Actual Contamination Target (drinking water, human food chain, or environmental threat) exists for the watershed, assign the calculated hazardous waste quantity score, or a score of 100, whichever is greater.	100
15. Assign the highest value from SI Table 7 (observed release) or SI Table 3 (no observed release) for the hazardous substance waste characterization factors below. Multiply each by the surface water hazardous waste quantity score and determine the waste characteristics score for each threat.	

	Substance Value X	HWQ =	Product	WC Score from Table below max = 100
Drinking Water Threat Toxicity/Persistence	10,000	100	1E + 6	Max = 100 32
Food Chain Threat Toxicity/Persistence/Bioaccumulation	500,000	100	5E + 7	Max - 1,000 56
Environmental Threat Ecotoxicity/Persistence/Ecobioaccumulation	5,000,000	100	5E + 6	Max = 1,000 100

PRODUCT	WC SCORE
0	0
>0 to <10	1
10 to <100	2
100 to <1,000	3
1,000 to <10,000	6
10,000 to <1E + 05	10
1E + 05 to <1E + 06	18
1E + 06 to <1E + 07	32
1E + 07 to <1E + 08	56
1E + 08 to <1E + 09	100
1E + 09 to <1E + 10	180
1E + 10 to <1E + 11	320
1E + 11 to <1E + 12	560
1E + 12 or greater	1,000

Targets (T) Score

SURFACE WATER PATHWAY THREAT SCORES

Threat	Likelihood of Release (LR) Score	Targets (T) Score	Pathway Waste Characteristics (WC) Score (determined above)	Threat Score LR x T x WC / 82,500
Drinking Water	500	7.2	32	(max = 100) 1.00
Human Food Chain	500	2	56	(max = 100) 0.68
Environmental	500	4	100	(max = 60) 2.42

SURFACE WATER PATHWAY SCORE
(DRINKING WATER THREAT + HUMAN FOOD CHAIN THREAT + ENVIRONMENTAL THREAT)

(max = 100)
4.1

SOIL EXPOSURE PATHWAY

If there is no observed contamination (e.g, ground water plume with no known surface source), do not evaluate the soil exposure pathway. Discuss evidence for no soil exposure pathway.

Soil Exposure Resident Population Targets Summary

For each property (duplicate page 35 as necessary):

If there is an area of observed contamination on the property and within 200 feet of a residence, school, or day care center, enter on Table 15 each hazardous substance by sample ID. Record the detected concentration. Obtain cancer risk, and reference dose concentrations from SCDM. Sum the cancer risk and reference dose percentages for the substance, enter N/A for the percentage. FI the percentage sum calculated for cancer risk or reference dose equals or exceed 100%, evaluate the residents and students as Level I. If both percentages are less than 100% or all are N/A, evaluate the targets as Level II.

***Soil Exposure was not considered for Photocircuits because all work occurs indoors and 80% of the site is paved.**

SI TABLE 15: SOIL EXPOSURE RESIDENT POPULATION TARGETS

Residence ID:_____ Level I _____ Level II _____ Population _____

Sample ID	Hazardous Substance	Conc. (mg/kg)	Cancer Risk Concentration	%Cancer Risk Conc.	RID	% of RID	Toxicity Value	References
			HIGHEST PERCENT		SUM OF PERCENTS		SUM OF PERCENTS	

Residence ID: _____ Level I _____ Level II_____ Population _____

Sample ID	Hazardous Substance	Conc. (mg/kg)	Cancer Risk Concentration	%Cancer Risk	RID	% of RID	Toxicity Value	References
			HIGHEST PERCENT		SUM OF PERCENTS		SUM OF PERCENTS	

Residence ID:_____ Level I _____ Level II _____ Population_____

Sample ID	Hazardous Substance	Conc. (mg/kg)	Cancer Risk Concentration	%Cancer Risk Conc	RID	% of RID	Toxicity Value	References
			HIGHEST PERCENT		SUM OF PERCENTS		SUM OF PERCENTS	

SOIL EXPOSURE PATHWAY WORKSHEET
RESIDENT POPULATION THREAT

LIKELIHOOD OF EXPOSURE	SCORE	DATA TYPE	REFS
1. OBSERVED CONTAMINATION: If evidence indicates presence of observed contamination (depth of 2 feet or less), assign a score of 550: otherwise, assign a 0. Note that a likelihood of exposure score of 0 results in a soil pathway score of 0.	0		
LE =	0		

TARGETS

2. RESIDENT POPULATION: Determine number of people living or attending school or daycare on a property with an area of observed contamination and whose residence, school, or day care center, respectively is on or within 200 feet of the area of observed contamination. Level I: _____ people x 10 = _____ Level II: _____ people x 1 = _____ **Sum=**			
3. RESIDENT INDIVIDUAL: Assign a score of 50 if any Level I resident population exists. Assign a score of 45 if there are Level II targets but no Level I targets. IF no resident population exists (i.e. no Level I or Level II targets), assign 0 (HRS Section 5.1.3).			
4. WORKERS: Assign a score from the table below for the total number of workers at the site and nearby facilities with areas of observed contamination associated with the site.			

Number of Workers	Score
0	0
1 to 100	5
101 to 1,000	10
> 1,000	15

5. TERRESTRIAL SENSITIVE ENVIRONMENTS: Assign a value for each terrestrial sensitive environment (SI Table 16) in an area of observed contamination.			

Terrestrial Sensitive Environment Type	Value			

6. RESOURCES: Assign a score of 5 if any one or more of the following resources is present on an area of observed contamination at the site: assign 0 if none applies. • Commercial agriculture • Commercial silvaculture • Commercial livestock production or commercial livestock grazing			
Total of Targets T =	0		

SI TABLE 16 (HRS TABLE 5-5): SOIL EXPOSURE PATHWAY TERRESTRIAL SENSITIVE ENVIRONMENT VALUES

TERRESTRIAL SENSITIVE ENVIRONMENT	ASSIGNED VALUE
Terrestrial critical habitat for Federal designated and endangered or threatened species National Park Designated Federal Wilderness Area National Monument	100
Terrestrial habitat known to be used by Federal designated or proposed threatened or endangered species National Preserve (terrestrial) National or State terrestrial Wildlife Refuge Federal land designated for protection of natural ecosystems Administratively proposed Federal Wilderness Area Terrestrial areas utilized by large or dense aggregations of animals (vertabrate species) for breeding	75
Terrestrial habitat used by State designated endangered or threatened species Terrestrial habitat used by species under review for Federal designated endangered or threatened status	50
State lands designated for wildlife or game management State designated Natural Areas Particular areas, relatively small in size, important to maintenance of unique biotic communities	25

SOIL EXPOSURE PATHWAY WORKSHEET
NEARBY POPULATION THREAT

LIKELIHOOD OF EXPOSURE	SCORE	DATA TYPE	REF
7. Attractiveness/Accessibility (from SI Table 17 or HRS Table 5-6) Value: ___ Area of Contamination (from SI Table 18 or HRS Table 5-7) Value: ___ Likelihood of Exposure (from SI Table 19 or HRS Table 5-8)			
LE =	N/E		

Note: if there is no area of observed contamination: LE = 0.
[3] A worst-case scenario of ten contaminated acres was used (no samples have been collected from site).

TARGETS	SCORE	DATA TYPE	REF
8. Assign a score of 0 if Level I or Level II resident individual has been evaluated or if no individuals within 1/4 mile travel distance of an area of observed contamination. Assign a score of 1 if nearby population is within 1/4 mile travel distance and no Level I or Level II resident population has been evaluated.			
9. Determine the population within 1 mile travel distance that is not exposed to a hazardous substance from the site (i.e. properties that are not determined to be Level I or Level II); record the population for each distance category in SI Table 20 (HRS Table 5-10). Sum the population values and multiply by 0.1.			
T =	N/E		

S1 TABLE 17 (HRS TABLE 5-6)
ATTRACTIVENESS/ACCESSIBILITY VALUES

Area of Observed Contamination	Assigned Value
Designated recreational area	100
Regularly used for public recreation (for example, vacant lots in urban area)	75
Accessible and unique recreational area (for example, vacant lots in urban area)	75
Moderately accessible (may have some access improvements-for example, gravel road) with some public recreation use	50
Slightly accessible (for example, extremely rural area with no road improvement) with some public recreation use	25
Accessible with no public recreation use	10
Surrounded by maintained fence or combination of maintained fence and natural barriers	5
Physically inaccessible to public, with no evidence of public recreation use	0

SI TABLE 18 (HRS TABLE 5-7): AREA OF CONTAMINATION FACTOR VALUES

Total area of the areas of observed contamination (square feet)	Assigned Value
≤ to 5,000	5
> 5,000 to 125,000	20
> 125,000 to 250,000	40
> 250,000 to 375, 000	60
>375,000 to 500,000	80
>500,000	100

S1 TABLE 19 (HRS TABLE 5-8): NEARBY POPULATION LIKELIHOOD OF EXPOSURE FACTOR VALUES

AREA OF CONTAMINATION FACTOR VALUE	ATTRACTIVENESS/ACCESSIBILITY FACTOR VALUE						
	100	75	50	25	10	5	0
100	500	500	375	250	125	50	0
80	500	375	250	125	50	25	0
60	375	250	125	50	25	5	0
40	250	125	50	25	5	5	0
20	125	50	25	5	5	5	0
5	50	25	5	5	5	5	0

SI TABLE 20 (HRS TABLE 5-10): DISTANCE WEIGHTED POPULATION VALUES FOR NEARBY POPULATION THREAT

Travel Distance Category (miles)	Pop.	Number of people within the travel distance category												
		0	1 to 10	11 to 30	31 to 100	101 to 300	301 to 1,000	1,001 to 3,000	3,001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	300,001 to 1,000,000	Pop. Value
Greater than 0 to 1/4		0	0.1	0.4	1.0	4	13	41	130	408	1,303	4,081	13,034	
Greater than 1/4 to 1/2		0	0.05	0.2	0.7	2	7	20	65	204	652	2,041	6,517	
Greater than 1/2 to 1		0	0.02	0.1	0.3	1	3	10	33	102	326	1,020	3,258	
													SUM =	

Reference(s): _____

SOIL EXPOSURE PATHWAY WORKSHEET (concluded)

WASTE CHRACTERISTICS

10. Assign the hazardous waste quantity score calculated for soil exposure (HRS Section 5.1.2.2 and HRS Table 5-2).	
11. Assign the highest toxicity value for the soil exposure pathway (SI Table 3 or 15).	
12. Multiply the toxicity and hazardous waste quantity scores. Assign the Waste Characteristics score from the table below:	WC= N/E

Product	WC Score
0	0
>0 to < 10	1
10 to <100	2
100 to < 1,000	3
1,000 to <10,000	6
10,000 to < 1E + 05	10
1E + 05 to < 1E + 06	18
1E + 06 to < 1E + 07	32
1E + 07 to < 1E + 08	56
1E + 08 or greater	100

RESIDENT POPULATION THREAT SCORE:
Likelihood of Exposure, Question 1;
(Targets = Sum of Questions 2,3,4,5,6)

$$\frac{LE \times T \times WC}{82{,}500}$$

NEARBY POPULATION THREAT SCORE:
Likelihood of Exposure, Question 7;
(Targets = Sum of Questions 8,9)

$$\frac{LE \times T \times WC}{82{,}500}$$

SOIL EXPOSURE PATHWAY SCORE:
Resident Population Threat + Nearby Population Threat

(Maximum of 100)
N/E

*Soil exposure was not evaluated

AIR PATHWAY

Air Pathway observed Substances Summary Table

On SI Table 21, list the hazardous substances detected in air samples of a release from the site. Include only those substances with concentrations significantly greater than background levels. Obtain benchmark, cancer risk, and reference dose concentrations form SCDM. For NAAQS/NESHAPS benchmarks, determine the highest percentage of benchmark obtained for any substance. For cancer risk and reference dose, sum the percentages for the substances listed. If benchmark, cancer risk or, reference dose concentrations are not available for a particular substance, enter N/A for the percentage. If the highest benchmark percentage or the percentage sum calculated form which the sample was taken and any closer distance categories as Level I. If the percentages are less than 100% or all are N/A, evaluate targets in that distance category and any closer distance categories that are not Level I as Level II.

***The Air Pathway was not scored because no evidence exists to suggest any type of threat, no violations have been documented and no air samples have been collected to document a release.**

SI TABLE 21: AIR PATHWAY OBSERVED RELEASE SUBSTANCES

Sample ID:_____ Level I _____ Level II _____ Distance from Sources(ml) _____ References _____

Hazardous Substance	Conc. (µg/m^3)	Gaseous Particulate	Benchmark Conc. (NAAQS or NESHAPS)	% of Benchmark	Cancer Risk Conc.	% of Cancer Risk Conc.	RID	% of RID
	Highest Toxicity/ Mobility		Highest Percent		Sum of Percents		Sum of Percents	

Sample ID:_____ Level I _____ Level II _____ Distance from Sources(ml) _____ References _____

Hazardous Substance	Conc. (µg/m^3)	Gaseous Particulate	Benchmark Conc. (NAAQS or NESHAPS)	% of Benchmark	Cancer Risk Conc.	% of Cancer Risk Conc.	RID	% of RID
	Highest Toxicity/ Mobility		Highest Percent		Sum of Percents		Sum of Percents	

Sample ID:_____ Level I _____ Level II _____ Distance from Sources(ml) _____ References _____

Hazardous Substance	Conc. (µg/m^3)	Gaseous Particulate	Benchmark Conc. (NAAQS or NESHAPS)	% of Benchmark	Cancer Risk Conc.	% of Cancer Risk Conc.	RID	% of RID
	Highest Toxicity/ Mobility		Highest Percent		Sum of Percents		Sum of Percents	

AIR PATHWAY WORKSHEET

LIKELIHOOD OF RELEASE	SCORE	DATA TYPE	REFS
1. OBSERVED RELEASE: If sampling data or direct observation support a release to air, assign a score of 550. Record observed release substances on SI Table 21.			
2. POTENTIAL TO RELEASE: If sampling data do not support a release to air, assign as score of 500. Optionally, evaluate air migration gaseous and particulate potential to release (HRS Section 6.1.2).			
LR =	**N/E**		

TARGETS

3. ACTUAL CONTAMINATION POPULATION: Determine the number of people within the target distance limit subject to exposure from a release of a hazardous substance to the air. a) Level I: _____ people x 10 = _____ b) Level II: _____ people x 1= _____ Total =			
4. POTENTIAL TARGET POPULATION: Determine the number people within the target distance limit not subject to exposure from a release of a hazardous substance to the air, and assign the total population score from SI Table 22. Sum the values and multiply the sum by 0.1.			
5. NEAREST INDIVIDUAL: Assign a score of 50 if there are any Level I targets. Assign a score of 45 if there are Level II targets but no Level I targets. If no Actual Contamination Population exists, assign the Nearest Individual score from SI Table 22.			
6. ACTUAL CONTAMINATION SENSITIVE ENVIRONMENTS: Sum the sensitive environment values (SI Table 13) and wetland acreage values (SI Table 23) for environments subject to exposure from the release of a hazardous substance to the air.			
7. POTENTIAL CONTAMINATION SENSITIVE ENVIRONMENTS: Use SI Table 24 to evaluate sensitive environments not subject to exposure from a release.			
8. RESOURCES: Assign a score of 5 if one or more air resources apply within 1/2 mile of a source; assign a 0 if none applies. • Commercial agriculture • Commercial silviculture • Major or designated recreation area			
SUM OF TARGETS T=	**N/E**		

Sensitive Environment Type	Value

Wetland Acreage	Value

SI TABLE 22 (FROM HRS TABLE 6-17): VALUES FOR POTENTIAL CONTAMINATION AIR TARGET POPULATIONS

			Number of People within the Distance category											
Distance From Site	Pop.	Nearest Individual (choose highest)	1 to 10	11 to 30	31 to 100	101 to 300	301 to 1,000	1,001 to 3,000	3,001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	300,001 to 1,000,000	1,000,000 to 3,000,000	Pop. Value
On a source		20	4	17	53	164	522	1,633	5,214	16,325	52,137	163,246	521,360	1,632,455	
0 to ¼ mile		*	1	4	13	41	131	408	1,304	4,081	13,034	40,812	130,340	408,114	
>¼ to ½ mile		2	0.2	0.9	3	9	28	88	282	822	2,815	8,815	28,153	88,153	
>½ to 1 mile		1	0.06	0.3	0.9	3	8	26	83	261	834	2,612	8,342	26,119	
>1 to 2 miles		0	0.02	0.09	0.3	0.8	3	8	27	83	266	833	2,659	8,326	
>2 to 3 miles		0	0.009	0.04	0.1	0.4	1	4	12	38	120	375	1,199	3,755	
>3 to 4 miles		0	0.005	0.02	0.07	0.2	0.7	2	7	28	73	229	730	2,285	
	Nearest Individual =												Sum =		

* Score = 20 if the Nearest Individual is within 1/8 mile of a source; score = 7 if the Nearest Individual is between 1/8 and 1/4 mile of a source.

References_____

SI TABLE 23 (HRS TABLE 6-18): AIR PATHWAY VALUES FOR WETLAND AREA

Wetland Area	Assigned Value
<1 acre	0
1 to 50 acres	25
>50 to 100 acres	75
>100 to 150 acres	125
>150 to 200 acres	175
>200 to 300 acres	250
>300 to 400 acres	350
>400 to 500 acres	450
>500 acres	500

SI TABLE 24: DISTANCE WEIGHTS AND CALCULATIONS FOR AIR PATHWAY POTENTIAL CONTAMINATION SENSITIVE ENVIRONMENTS

Distance	Distance Weight	Sensitive Environment Type and Value (from SI Table 13 and 23)	Product
On a source	0.10	x	
		x	
0 to ¼ mile	0.025	x	
		x	
¼ to ½ mile	0.0054	x	
		x	
½ to 1 mile	0.0016	x	
		x	
1 to 2 miles	0.0005	x	
		x	
2 to 3 miles	0.00023	x	
		x	
3 to 4 miles	0.00014	x	
		x	
>4 miles	0	x	
		Total Environments Score =	N/E

AIR PATHWAY (concluded)

WASTE CHARACTERISTICS

9. If any Actual Contamination Targets exist for the air pathway assign the calculated hazardous waste quantity score or a score of 100, whichever is greater; if there are not Actual Contamination Targets for the air pathway, assign the calculated HWQ score for sources available to air migration.	
10. Assign the highest air toxicity/mobility value from SI Table 3 or 21	
11. Multiply the air pathway toxicity/mobility and hazardous waste quantity scores. Assign the Waste Characteristics score from the table below:	WC = N/E

Product	WC Score
0	0
>0 to < 10	1
10 to <100	2
100 to <1,000	3
1,000 to 10,000	6
10,000 to IE + 05	10
1E + 05 to < 1E + 06	18
1E + 06 to < 1E + 07	32
1E + 07 to < 1E + 08	56
1E + 08 or greater	100

AIR PATHWAY SCORE: $\frac{LR \times T \times WC}{82,500}$

(maximum of 100)
N/E

*Air pathway was not evaluated.

SITE SCORE CALCULATION	S	S^2
GROUND WATER PATHWAY SCORE (S_{GW})	2.72	7.40
SURFACE WATER PATHWAY SCORE (S_{SW})	4.1	16.81
SOIL EXPOSURE (S_S)	0	0
AIR PATHWAY SCORE (S_A)	0	0
Summed Values =	6.82	24.21
SITE SCORE $\sqrt{\frac{S_{GW}^2 + S_{SW}^2 + S_S^2 + S_A^2}{4}}$		

COMMENTS

$$\text{SITE SCORE} = \sqrt{\frac{16.81 + 7.4}{4}}$$

$$\text{SITE SCORE} = \sqrt{\frac{24.21}{4}}$$

$$\text{SITE SCORE} = \sqrt{6.05}$$

SITE SCORE = 2.46

U.S. EPA REGION IV

SDMS

Unscannable Material Target Sheet

DocID: 10732663 Site ID: GAD095811162

Site Name: Photocircuits Atlanta Inc.

Nature of Material:

Map:	☑	Computer Disks:	☐
Photos:	☐	CD-ROM:	☐
Blueprints:	☐	Oversized Report:	☐
Slides:	☐	Log Book:	☐

Other (describe): Location Map (Ref. 1)

Amount of material: _____

* Please contact the appropriate Records Center to view the material *

Reference 2

COMPLETE
ENG.

DRAFT

ENVIRONMENTAL PRIORITIES INITIATIVE

PRELIMINARY ASSESSMENT/RCRA FACILITY ASSESSMENT OF

PHOTOCIRCUITS ATLANTA

ATLANTA, GEORGIA

EPA ID # GAD095811162

GEORGIA ENVIRONMENTAL PROTECTION DIVISION

June 1989

Prepared by:

Tim Cash
Environmental Specialist

Reviewed by:

Bill Mundy (FOR)
Unit Coordinator

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TABLES AND FIGURES

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TABLES

1.0 INTRODUCTION

The Georgia Environmental Protection Division, Hazardous Waste Management Program (EPD) conducted a Preliminary Assessment (PA) and a Visual Site Inspection (VSI) at the Photocircuits facility on May 17, 1989. The task was performed as part of the Environmental Priorities Initiative as described in Technical Directive Document (TDD) No. F4-8810-39.

1.1 OBJECTIVE

The major objective of the EPI program is to conduct an on-site and off-site inspection of the assigned facility in order to characterize the Solid Waste Management Units (SWMUs) associated releases and other Areas of Concerns (AOC). The inspection is conducted in a two-phase operation: the Preliminary Review which includes the review and evaluation of specific file documents; and the Visual Site Inspection (VSI) which identifies all SWMUs, known releases, and AOCs.

1.2 SCOPE OF WORK

The scope of this investigation included the following activities:

- a file search of State files in an attempt to obtain and review specific documents that will help characterize the facility,
- development of a detailed site base map to scale including site features, solid waste management unit locations, areas of concern, and photo-documentation areas,
- evaluation of target populations within a 3-mile radius from the site with regard to groundwater, air, and within 15-mile stream distance for surface water,
- a private well survey within a 3-mile radius of the facility,
- photo-documentation of all Solid Waste Management Units (SWMUs) and related releases and exposure pathways,
- inspection and photo-documentation of all Areas of Concern (AOC).

2.0 SITE DESCRIPTION

2.1 SITE LOCATION

The Photocircuits facility is located at 350 Dividend Drive in Peachtree City, Fayette County, Georgia (Figures 1 & 2). The facility's specific geographic location is at 33° 20' 50" North latitude and 84° 34' 45" East longitude.

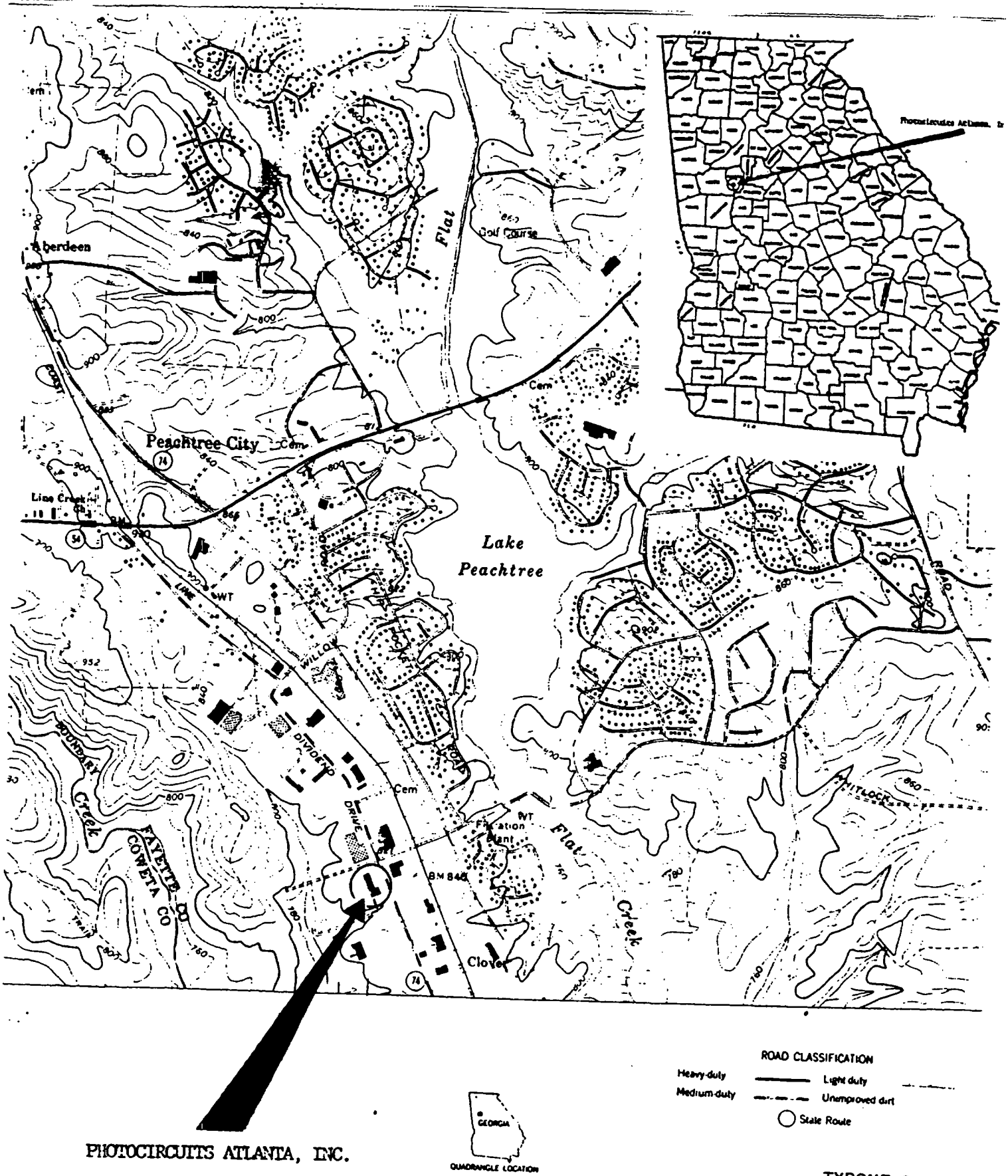
2.2 SITE FEATURES

The facility is located in an industrial park on approximately 10 acres of predominantly flat, open terrain. The major features of the Photocircuits site are the manufacturing plant and the waste treatment plant building (Figure 2) (Reference 4).

The manufacturing plant houses general offices, all manufacturing activities, shipping and receiving. Waste and virgin product storage are at the rear or west of the manufacturing building and the waste treatment plant building. Activities conducted in the waste treatment plant building consist of treatment of all wastewaters generated by manufacturing at the facility. Approximately 80% of the facility is paved and is used for parking and virgin material/waste storage.

2.3 OWNERSHIP HISTORY

The facility was previously operated as Topri, Incorporated under the ownership of Tokyo Print Industries, Ltd. of Japan. Topri submitted a Notification of Hazardous Waste Activity Form EPA 8700-12 dated August 19, 1980 (Reference 1). By correspondence dated January 11, 1982, Topri advised EPD that it intended to cease operations (Reference 2). Information regarding activities of Topri is very limited since there are no U.S. contacts familiar



PHOTOCIRCUITS ATLANTA, INC.

FIGURE 1

TYRONE, GA.
N3322 5—W8430/7.5

1965
PHOTOREVISED 1982
DMA 4080 I NE-SERIES V845

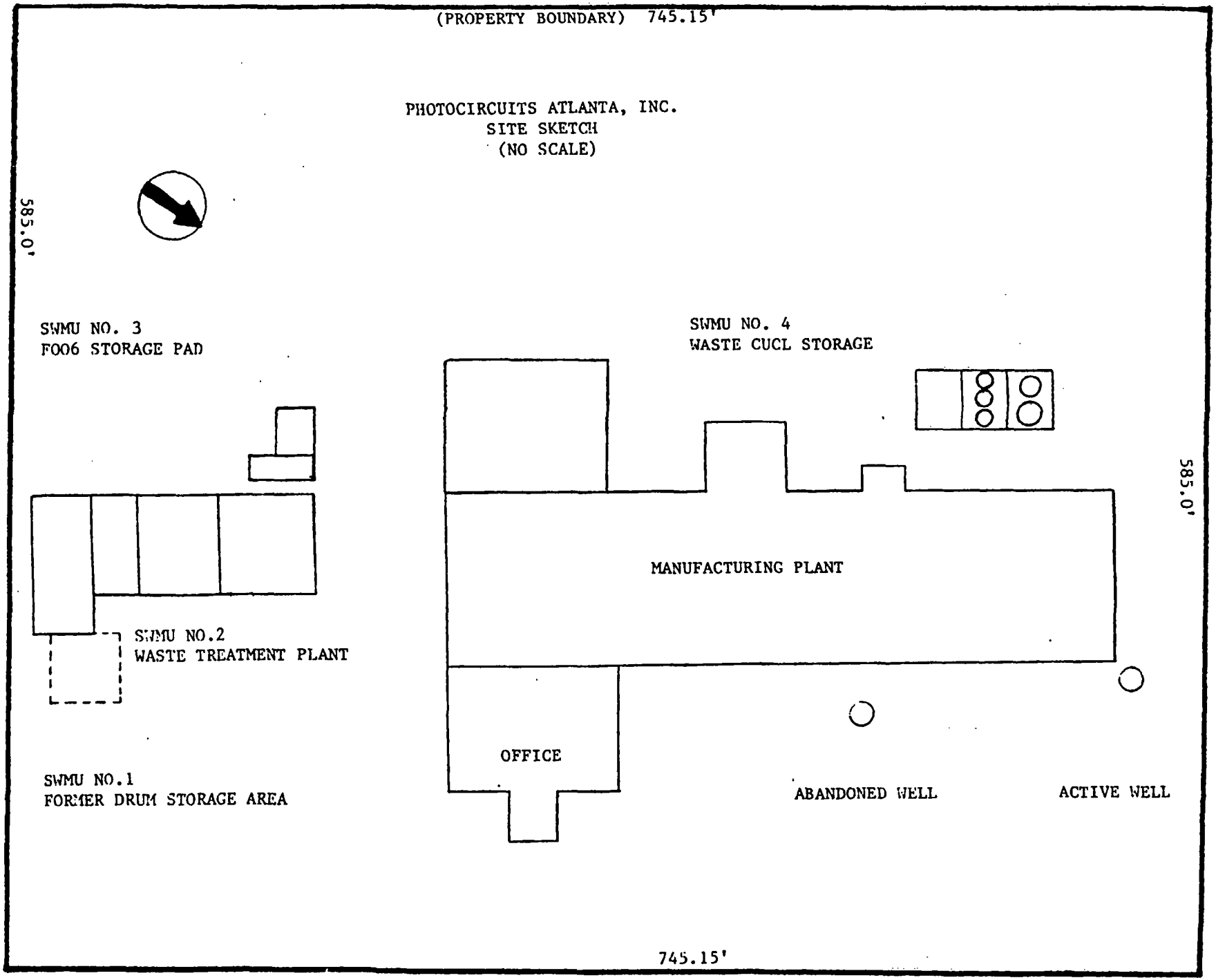

(PROPERTY BOUNDARY) 745.15'
PHOTOCIRCUITS ATLANTA, INC.
SITE SKETCH
(NO SCALE)
585.0'
SWMU NO. 3
F006 STORAGE PAD
SWMU NO. 4
WASTE CUCL STORAGE
MANUFACTURING PLANT
585.0'
SWMU NO.2
WASTE TREATMENT PLANT
OFFICE
SWMU NO.1
FORMER DRUM STORAGE AREA
ABANDONED WELL
ACTIVE WELL
745.15'

FIGURE 2

with the company's former operations at the facility. Photocircuits Atlanta, a wholly owned subsidiary of Kollmorgen Corporation, submitted EPA Form 8700-12 dated April 7, 1982 indicating ownership and operation of the facility. By correspondence dated September 11, 1986, EPD was advised that Photocircuits Division of Kollmorgen Corporation was to be sold to PC Acquisition Corporation on September 17, 1986 (Reference 3).

2.4 NATURE OF OPERATIONS

Photocircuits Atlanta manufactures printed circuit boards for the electronics industry. Hazardous wastes are generated from cleaning, etching and electroplating operations. The process begins with a non-conductive fiberglass laminate board which undergoes an acid copper electroplate. The copper plated board is then rough and finish sanded, washed with HCl, water rinsed and dried to remove film, grease, and oxidized materials. Circuits are then ink printed onto the cleaned boards. The printed board is dried and then etched in a CuCl/HCl bath leaving copper on the board only under the ink-coated circuit. The ink is then removed using a NaOH wash, exposing the underlying copper circuit. The board is then washed in dilute HCl, water-rinsed and dried. A solder mask is then screened onto the circuit and the board undergoes a FeCl rinse prior to hot air solder levelling. The circuit legend is stencilled onto the back of the board, the surface is cleaned with copper bright and the completed board is packaged for shipment.

The facility generates five waste streams which are described as follows and listed in order of volume generated:

1. Spent Cupric Chloride Solution (D002). This waste stream is generated as a result of etching and plating operations. Spent CuCl is stored in two interconnected fiberglass above ground storage tanks (2,500

gallons and 5,000 gallons) and is pumped from the manufacturing plant via above ground piping. Spent CuCl is recycled between the plating and etching lines and the storage tanks. When the CuCl is no longer suitable for use it is removed from the system by tank truck and manifested to an off-site facility for regeneration.

2. Wastewater treatment sludge (F006). The facility operates a wastewater treatment plant which treats all wastewaters from its manufacturing operations prior to discharge to the Georgia Utilities Company (Peachtree City) sewerage system. The entire system is a wastewater treatment unit as defined in 40 CFR 260.10. Wastewater from manufacturing operations are segregated into metal bearing (etching, plating) and non-metal bearing (acid/alkaline wash and inks). Non-metal bearing wastewater is pH adjusted and undergoes basic treatment prior to discharge while metal bearing wastewater undergoes pH adjustment, precipitation, flocculation and sludge filtration prior to discharge. Flocced and precipitated sludge is filter pressed to extract remaining liquids. The resulting sludge is placed in large plastic bags and stored in the F006 storage area at the rear or western end of the building. The waste is manifested in less-than-90-day intervals to an off-site facility.

3. Rolled solder flux (D008). This waste is generated from the hot air solder levelling operation. The spent solder flux is placed in fifty-five gallon drums and stored at the F006 storage area where it is manifested in less-than-90-day intervals to an off-site facility.

4. General Trash. This waste is generated from paper and plastic packaging, containers and cartons, pallets, etc. Waste is placed in a 30 yard roll-off container at the rear of the manufacturing plant and hauled to a sanitary landfill.

5. Spent Solvents (F001). The facility has a vapor degreaser following the hot air solder levelling operation which uses 1,1-trichloroethane to clean completed boards. Since December 1987, one 55 gallon drum of spent solvent has reportedly been generated from this unit (Reference 7).

2.5 PERMIT AND REGULATORY HISTORY

Photocircuits is currently classified as a generator of hazardous waste. A Part A Application for a Hazardous Waste Facility Permit dated January 21, 1981 was submitted to U.S. EPA Region IV by Topri, Incorporated. The application identified Topri Inc. as the owner and operator of the facility. Hazardous waste management activities identified by the application are summarized in Table 1 (Reference 4). A revised Part A Application dated September 13, 1982 identified Photocircuits Atlanta, Inc. as the new operator and Kollmorgen Corporation as the new owner. Hazardous waste management activities described by the revised Part A were similar to those described by the Topri Part A with the exception of revised estimated annual quantity of wastes (Reference 5). During an inspection by EPD on March 2, 1984, it was determined that the facility's regulatory status was that of a generator rather than a treatment, storage or disposal facility (TSD) and by correspondence dated May 24, 1984, EPD acknowledged Photocircuit's earlier request for withdrawal of its Part A and change in status to generator (References 6 & 7).

Georgia EPD has inspected the facility on May 8, 1980; March 2, 1984; October 19, 1984; February 25, 1988 and June 29, 1988.

During the October 19, 1984 inspection violations of 40 CFR 262.35(a)(4) were observed and a request for corrective measures was made in a November 6, 1984 Notice of Violation (Reference 8). By Compliance Status Letter dated

March 7, 1984, EPD verified that all violations had been eliminated (Reference 9).

On February 25, 1988, an inspection was conducted to investigate an anonymous complaint regarding an alleged hole in a sump receiving influent to the wastewater treatment system (Reference 10). The inspection confirmed that no release had occurred from the subject unit. However, it was observed that some spillage of F006 onto pavement surrounding the F006 storage area had occurred (Reference 11). Numerous violations of 40 CFR 262.34(a)(1), (2), and (4) were observed during the inspection and a request for corrective measures was made in a March 23, 1988 Notice of Violation (Reference 12). On June 29, 1988, an inspection was conducted as a follow-up to the February 25, 1988 inspection and also to assess the facility's compliance with 40 CFR 262.34(a)(1) [40 CFR 265.191] relative to hazardous waste accumulation in tanks. The facility was found to be in compliance with violations observed during the February 25, 1988 inspection. However, numerous violations of the tank standards were observed and a request for corrective measures made in Notice of Violation dated August 18, 1988 (References 13 & 14).

3.0 ENVIRONMENTAL SETTING

3.1 WATER SUPPLY

Potable water within the study area is provided by both public and domestic water supply systems. Public water systems consist of those permitted under the Georgia Safe Drinking Water Act and include both large, publicly-owned water supply systems as well as smaller privately-owned community and non-community water supplies.

Fayette County Water System provides water to approximately 37,010 people. One surface water intake, located topographically downgradient of the facility on Line Creek is within a three mile radius of the facility. The Willow Bend and Log House wells contribute groundwater to the Fayette County Water System on a supplemental basis and are also located within a three mile radius of the facility. Smaller, privately-owned, permitted water supply systems within a three mile radius of the facility use groundwater exclusively as a source and include the Shoal Creek community water supply system located on Georgia Highway 34 west of Fisher Road and the Pitney Bowes Training Center non-community water supply located on Aberdeen Parkway in Peachtree City.

Residences in Fayette County lying outside areas where distribution mains exist within a three mile radius of the facility use domestic wells for drinking water. Residences in Coweta County lying outside those areas served by community water systems also use domestic wells for drinking water (Reference 15).

During the Visual Site Inspection (VSI) conducted on May 17, 1989 a water supply well was discovered at the northernmost corner of the manufacturing plant. A copy of the well log obtained during the VSI shows that the well was drilled in 1986 to a depth of 610 feet, is cased to a depth of 82 feet and had a static water level of 15 feet below land surface. The well currently

provides drinking water to Photocircuits and is also interconnected to the Fayette County Water System.

3.2 SURFACE WATER

The nearest hydraulically downgradient perennial surface water feature is an unnamed tributary to Line Creek which, at its closest point, is about 1,000 feet west of the facility boundary. A small, intermittent drainage feature to the south crosses the facility property boundary at its southernmost edge south of the F006 storage pad. The western half of the facility appears to be built on top of fill with the drainage feature being channelled under the fill through a buried culvert across the site. Surface water run-off would enter storm drain inlets across the facility and flow to the south before entering the intermittent drainage feature south of the F006 storage pad (Reference 15).

3.3 HYDROGEOLOGY

The geologic and hydrogeologic conditions in the study area were researched as part of the site investigation. A preliminary literature review was conducted to determine surface and subsurface geologic conditions, soil character, and the status of groundwater transport and storage.

The facility is located within the Piedmont Physiographic Province. The geology in the area consists principally of metamorphic rock (primarily biotite gneiss and schist) and possibly some igneous rock (primarily granite). Primary porosity and permeability of the metamorphic rock are low; however, structural deformations have produced planes of secondary permeability along which groundwater movement occurs. These secondary permeability zones consist of fault planes, fractures, joints, shear zones,

and planes of shcistosity resulting from rock deformation.

Groundwater also occurs under confined or water-table conditions within the residual soils and underlying rock. In some isolated areas, residuum at depth may contain a higher percentage of clay, which can lead to the formation of a saturated lens, above and below which unsaturated conditions exist.

The depth to the permanent water table is highly variable, being dependent on a variety of factors, including surface topography, soil permeability, rainfall/evapotranspiration, and underlying bedrock structure. The water table generally follows the land surface configuration, as a subdued expression of the surface topography. However, the complex geometry of the secondary permeability features typically results in higher anisotrophic groundwater flow in bedrock aquifers.

Recharge to the water-table aquifer is direct through the surface soil either by infiltration or rainfall or by seepage from streambeds and surface impoundments. Because of the low permeability of the residual soils, infiltration rates are low and subsequent surface-water runoff high (Reference 16).

3.3.1 Geology

Geologic formations found at the subject site are included in the Atlanta Group of the south Piedmont Lithiostratigraphic Province (Reference 17). Rock types in the subject area associated with this group consist primarily of gneiss, schist, amphibolite and granitic gneiss containing biotite, muscovite, quartz and feldspar in order of increasing abundances. The base of the units within the Province are not exposed, therefore their thickness is not known (Reference 18).

Generally, rocks throughout the Province strike northeast and dip southeast; however, local anomalies do occur. Schistosity roughly parallels

structural strike and dip offerring conduits for granitic intrusions (Reference 19). Fractures are larger and more numerous near the surface and become narrower and more widely spaced with depth. Generally, areas with large, densely spaced fractures develop thicker layers of saprolite (Reference 18). Quartz and mica schist typically weather to a reddish, sandy soil while amphibolite and hornblende gneiss decompose to a yellow-brown clayey soil (Reference 20).

3.3.2 Soils

Soils at the facility consist of a Cecil sandy loam with 2-6% slopes. Permeabilities associated with this soil type range from less than 10^{-3} cm/sec. to greater than 10^{-5} cm/sec. (Reference 21).

3.3.3 Groundwater

Groundwater in the area is confined to joints, fractures, and contact zones in the crystalline rocks, and pore spaces in the saprolite and alluvium (Reference 18). The amount of stored water depends on the size and distribution of the joints and fractures as well as the thickness and porosity of the overlying residuum. Groundwater is typically found under water table conditions; however, semiconfined conditions can also exist. The aquifer is recharged locally by precipitation which infiltrates (Reference 20). As noted by Cressler "...recharge of the aquifer may be significant in stream valleys, drainages and draws that receive constant recharge from large catchment areas, or in broad flat areas covered by deep saturated soil" (Reference 18).

3.4 CLIMATE AND METEOROLOGY

The mean annual precipitation for the Atlanta Area for the period 1951-1974 was 48.19 inches. Average summer temperature is 77°F and the average winter temperature is 44°F (Reference 21). Mean annual lake

evapotranspiration is 42 inches (Reference 22).

3.5 LAND USE

Land use within a three mile radius consists of commercial, industrial, residential and some agricultural (Reference 15).

3.6 POPULATION DISTRIBUTION

The total population within a three mile radius of the facility is estimated to be 7,000 (Reference 15). Population within a 1 mile, 2 mile and 3 mile radius is estimated at 2,030, 3,500, and 1,470 respectively.

3.7 CRITICAL HABITATS/ENDANGERED SPECIES

No critical habitats were identified within the study area.

The ranges of two endangered species encompass the facility and surrounding vicinity, the red-cockaded woodpecker - Picoides borealis (Viellof) and the southern bald eagle - Haliaetus luecocephalus (Linnaeus) (Reference 23).

4.0 VISUAL SITE INSPECTION (VSI)

The Visual Site Inspection of the Photocircuits site was performed May 17, 1989. The VSI focused on the past and present waste streams at the facility in order to identify all Solid Waste Management Units (SWMUs) and to collect information beneficial in assessing their potential to release hazardous waste or constituents to the environment.

4.1 SOLID WASTE MANAGEMENT UNITS

Four SWMU's were evaluated during the VSI and are identified on Figure 3 and Table 1.

The VSI was conducted on May 17, 1989. The inspection began with an entrance interview with Wendell Quakenbush and Joe Wilkeyson to explain the purpose of the inspection and to outline data needs. Mr. Quakenbush described the manufacturing process, identified waste streams and identified physical locations of SWMUs on a site sketch. Hazardous Waste Manifests were reviewed for 1988 and 1989 to determine waste characteristics and quantities for that time period. A visual inspection at the entire facility was conducted to evaluate each SWMU.

TABLE 2

SOLID WASTE MANAGEMENT UNITS

PHOTOCIRCUITS ATLANTA, INC.

FAYETTE COUNTY, GEORGIA

Location Number (Fig. 2)	Name	RCRA Regulated	Status
1	Former Drum Storage Area	Yes	Inactive
2	Waste Treatment Plant	No	Active
3	F006 Storage Pad	Yes	Active
4	Waste CuCl Storage	Yes	Active

SWMU NUMBER: 1

SWMU NAME: Former Drum Storage Area

SWMU DESCRIPTION: This unit is shown on the Photocircuits Part A application dated September 13, 1982 as being located northeast of the Waste Treatment Plant. The Part A shows the dimensions of the unit to be 40' x 40'. No other construction information is available.

DATE OF START-UP: Unknown.

DATE OF CLOSURE: According to Mr. Quakenbush, this unit was paved over during an expansion of the Waste Treatment Plant and parking lot. No physical evidence exists. No dates for the expansion and construction were known.

WASTES MANAGED: No documentation is available indicating what types of waste were stored in this unit, although the Photocircuits Part A application indicates F001, F002, F006, F007, F008 and F009 wastes were stored in drums at the facility.

RELEASE CONTROLS: Unknown.

RELEASE HISTORY: None.

PHOTOGRAPH NO.: 1.1

SWMU NUMBER: 2

SWMU NAME: Waste Treatment Plant

SWMU DESCRIPTION: This unit treats all process wastewaters generated by the facility as described in Section 2.4.2. The entire treatment process occurs in tanks with secondary containment and is contained under a roofed structure with walls.

DATE OF START-UP: Exact date of start-up is unknown but was operated by Topri as early as August 1980.

DATE OF CLOSURE: Unit is still active.

WASTES MANAGED: Wastes treated are primarily both metal and non-metal bearing acid and alkaline wastewaters generated from facility manufacturing operations. Primary metals of concern are copper from etching and plating operations and lead from hot air soldering operation.

RELEASE CONTROLS: All wastes are managed in tanks with secondary containment.

RELEASE HISTORY: None.

PHOTOGRAPH NO.: 1.1

SWMU NUMBER: 3

SWMU NAME: F006 Storage Pad

SWMU DESCRIPTION: This unit is used for the storage of filter cake sludge designated as F006 hazardous waste, spent rolled solder flux designated as D008 hazardous waste and spent lubricating oils. The unit consists of a monolithic reinforced concrete slab with curbing on three sides. On the north side of the unit is ramped for forklift access. The unit is surrounded with chainlink fence.

DATE OF START-UP: Unknown.

DATE OF CLOSURE: Active.

WASTES MANAGED: F006, D008, waste oil.

RELEASE CONTROLS: The unit is equipped with concrete curbing and flooring.

RELEASE HISTORY: None.

PHOTOGRAPH NO.: 1.2

SWMU NUMBER: 4

SWMU NAME: Waste CuCl Storage

SWMU DESCRIPTION: This unit consists of two 2,500 gallon and 5,000 gallon capacity each above ground tanks used for the storage of waste and virgin CuCl solution. The tanks are equipped with secondary containment although feed pipes are not.

DATE OF START-UP: Exact date unknown although tanks are reported to have been used as early as 1980.

DATE OF CLOSURE: Active.

WASTES MANAGED: CuCl solution, corrosive liquid, D002.

RELEASE CONTROLS: Secondary containment.

RELEASE HISTORY: None.

PHOTOGRAPH NO.: 1.3

REFERENCES

1. Notification of Hazardous Waste Activity, August 19, 1980; Photocircuits Files, Generator Compliance Unit, Georgia Environmental Protection Division.

2. Correspondence, January 11, 1982; Photocircuits File, Generator Compliance Unit, Georgia Environmental Protection Division.

3. Correspondence, September 11, 1986; Photocircuits File, Generator Compliance Unit, Georgia Environmental Protection Division.

4. Part A Application, January 21, 1981; Photocircuits, Photocircuits File, Generator Compliance Unit, Georgia Environmental Protection Division.

5. Part A Application, January 21, 1981; Topri Inc., Photocircuits File, Generator Compliance Unit, Georgia Environmental Protection Division.

6. Trip Report, March 2, 1984; Photocircuits File, Generator Compliance Unit, Georgia Environmental Protection Division.

7. Correspondence, May 24, 1984; Photocircuits File, Generator Compliance Unit, Georgia Environmental Protection Division.

8. Notice of Violation, November 6, 1984; Photocircuits File, Generator Compliance Unit, Georgia Environmental Protection Division.

9. Compliance Status Letter, March 7, 1984; Photocircuits File, Generator Compliance Unit, Georgia Environmental Protection Division.

10. Complaint Record 8-008, January 29, 1988; Photocircuits File, Generator Compliance Unit, Georgia Environmental Protection Division.

11. Trip Report, March 24, 1988; Photocircuits File, Generator Compliance Unit, Georgia Environmental Protection Division.

12. Notice of Violation, March 23, 1988; Photocircuits File, Generator Compliance Unit, Georgia Environmental Protection Division.

13. Trip Report, August 18, 1988; Photocircuits File, Generator Compliance Unit, Georgia Environmental Protection Division.

14. Notice of Violation, August 18, 1988; Photocircuits File, Generator Compliance Unit, Georgia Environmental Protection Division.

15. U.S. Geologic Survey, 7.5 minute series topographic quadrangles; Tyrone, 1982; Madras, 1983; Sharpsburg, 1982, Senoia, 1982.

16. Seitzingers Part B Permit Application, Land Disposal Unit, Georgia Environmental Protection Division.

17. Higgins, M. W. and R. L. Atkins, 1981, The Stratigraphy of the Piedmont Southeast of the Brevard Zone in the Atlanta, Georgia Area in Wigley, P.B., ed., Latest Thinking on the Stratigraphy of Selected Areas in Georgia: Georgia Geologic Survey Information Circular 54-A, p. 40.

18. Cressler, C. W., C. J. Thurmond, and W. G. Hester, 1983; Groundwater in the Greater Atlanta Region, Georgia: Georgia Geologic Survey Information Circular 63.

19. McConnell, K. I. and C. E. Abrams, 1984; Geology of the Greater Atlanta Region, Georgia: Geologic Survey, Bulletin 96.

20. Herrick, S. M. and H. E. LeGrand, 1949; Geology and Groundwater Resources of the Atlanta Area, Georgia: Georgia Geologic Survey Bulletin 77.

21. Soil Survey of Clayton, Fayette and Henry Counties, Georgia, U.S.D.A. Soil Conservation Service, 1979.

22. Climatic Atlas of the United States, U. S. Department of Commerce, National Climatic Center, Ashville, North Carolina, 1979.

23. Georgia's Protected Wildlife, Georgia Department of Natural Resources, September, 1987.

Reference 3

Holly Stoddard

From: Ellen Mills <emills@admin.co.fayette.ga.us>
To: Holly Stoddard <hstoddard@tnainc.com>
Sent: Monday, February 12, 2001 5:07 PM
Subject: Re: Fayette County

Photocircuits Atlanta Inc
attn: Jen Minerva
31 Sea Cliff Ave
Glen Cove NY 11542

Holly Stoddard wrote:

> Dear Kenneth Spaller,My name is Holly Stoddard and I am a contractor for EPA and am looking for the current owners of property at 350 Dividend Drive, Peachtree City, Fayette County, Georgia. The records I have go back to 1986 when PC Aquisition Corporation bought the property on Sep. 7, 1986. Any information from then to the present would be great. I appreciate any and all the help you can provide me and thank you for your time.Holly Stoddard
> TN & Associates, Inc.
> 678-355-5550

Record of Telephone Conversation

Reference 4

Date: February 13, 2001 Time: 1415	PHOTOCIRCUITS ATLANTA Peachtree City, Georgia EPA ID Number: GAD095811162
Organization: TN & Assoc., Inc., Reg. 4 EPA STAT Contract Name: Holly Stoddard Signature:_____	Contacted: Mr. Gene Miller Fayette County Tax Assessor 140 Stonewall Avenue #108 770-460-5730

Subject: Property Information for Facility

Spoke with Gene Miller and verified that Photocircuits owned more property at 810 Dividend Drive that was bought in 1993.

RESPONSE REQUIRED

(x) None ( ) Phone call ( ) Memo ( ) Letter ( ) Report

cc: (x) File (x) Project Manager ( ) Principal Investigator ( ) Other (specify)

Reference 5

EPA United States Environmental Protection Agency

Envirofacts Warehouse | Hazardous Waste Data | Report Error

Overview | Law | EXIT EPA | Query | Model | Feedback | EF Home

RCRIS Query Results

HANDLER ID: Equal To: **GAD984318899**
Results are based on data extracted on JUN-22-2000
Note: Click on the underlined CORPORATE LINK value for links to that company's environmental web pages. Click on the underlined MAPPING INFO value to obtain mapping information for the facility. Click on the underlined FACILITY ID value to view EPA Facility information for the facility.

Go To Bottom Of The Page

HANDLER NAME:	PHOTOCIRCUITS CORP	HANDLER ID:	GAD984318899
STREET:	810 DIVIDEND DR	FACILITY ID:	GAD984318899
CITY:	PEACHTREE CITY	CORPORATE LINK:	No
STATE:	GA	COUNTY:	FAYETTE
ZIP CODE:	30260	MAPPING INFO:	MAP
EPA REGION:	4		

Contact Information

Name	Street	City	State	ZIP Code	Phone	Type of Information
QUAKENBUSH WENDELL	350 DIVIDEND DR	PEACHTREE CITY	GA	30269	(404) 487-8888	Notification Data - Core

Handler/Facility Classification

Handler Type	Land Disposal	Incinerator	Boiler and/or Industrial Furnace	Storage and Treatment
LARGE QTY GENERATOR				

Go To Top Of The Page

Total Number of Facilities Displayed: 1

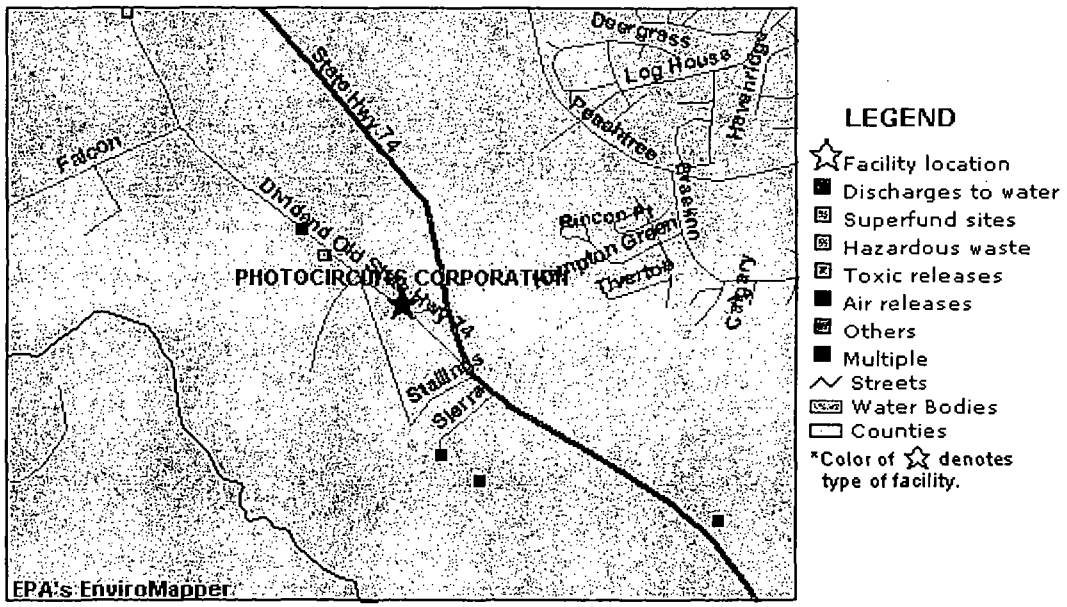
EPA United States Environmental Protection Agency

Envirofacts Warehouse | Latitude/Longitude Info | Report Error

Overview | EZ Query | Query | Model | Feedback | EF Home

Facility Location Information

PHOTOCIRCUITS CORPORATION
EPA Facility ID: GAD984318899
Latitude: 33.35919 Longitude: -84.563582



The latitude and longitude coordinates above come from the Envirofacts Locational Reference Tables (LRT). The method used to derive the Most Accurate Coordinates was ADDRESS MATCHING-HOUSE NUMBER. These coordinates correspond to the PLANT ENTRANCE (GENERAL) location and represent the best location for the facility. The coordinates were obtained from CONTRACTOR.

Use EnviroMapper to immediately generate a "live" map of this facility.

Map with EnviroMapper

Use SiteInfo to map all the facilities surrounding this latitude/longitude and to produce a cumulative report on demographic and safe drinking water information.

Map with Site Info

Facility Location Informa

Program System	Program System ID	Default Map Value	Latitude	Longitude	Map Coordinate	Horizo Collection
RCRIS	GAD984318899	N	33.35919	-84.563582	Yes	ADDRESS MATCHIN HOUSE NI
RMP	100000149109	N	33.380111	-84.581444	Yes	INTERPOI - DIGITAL SRCE (TIC
TRIS	30269PHTCR810DI	Y	33.35919	-84.563582	Yes	ADDRESS MATCHIN HOUSE NI

Query executed on 13-FEB-2001

EPA United States Environmental Protection Agency

Envirofacts Warehouse | Queries | Report Error | EF Overview | Query | Model | Feedback | EF Home

ENVIROFACTS REPORT ON PHOTOCIRCUITS CORPORATION
810 DIVIDEND DR.
PEACHTREE CITY, GA 30269

Map this facility

Map this facility using one of Envirofact's mapping utilities.

EPA Facility Information

This query was executed on FEB-13-2001

Toxic Releases for Reporting Year 1998

TRI FACILITY ID: 30269PHTCR810DI

SIC Codes for 1998

SIC CODE	SIC CODE DESCRIPTION
3672	PRINTED CIRCUIT BOARDS

Chemicals Transferred to other Sites

CHEMICAL NAME	TRI CHEM ID	DOCUMENT	RELEASE AMOUNTS LBS/YR	RELEASE BASIS CODE	TYPE MAN.
COPPER COMPOUNDS	N100	1398125244335	5	OTHER	INCINERATIC FUEL VALUE
COPPER COMPOUNDS	N100	1398125244335	250	MONITORING DATA	WASTEWATE (EXCLUDING

COPPER COMPOUNDS	N100	1398125244335	250	MONITORING DATA	WASTEWATE (EXCLUDING
COPPER COMPOUNDS	N100	1398125244335	485	OTHER	OTHER REUS
COPPER COMPOUNDS	N100	1398125244335	25177	MONITORING DATA	METALS REC
COPPER COMPOUNDS	N100	1398125244335	68258	MONITORING DATA	METALS REC

Chemicals Released to Air

CHEMICAL NAME	TRI CHEM ID	DOCUMENT	RELEASE AMOUNTS LBS/YR	RELEASE BASIS CODE	FUGI OR S' INDIC
CHLORINE	007782505	1398125244501	5	OTHER	FUGIT OR NC POINT EMISS
CHLORINE	007782505	1398125244501	250	MONITORING DATA	STACI POINT EMISS
FORMALDEHYDE	000050000	1398125244513	5	OTHER	FUGIT OR NC POINT EMISS
FORMALDEHYDE	000050000	1398125244513	5	OTHER	STACI POINT EMISS
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY)	007647010	1398125244754	5	OTHER	FUGIT OR NC POINT EMISS

HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY)	007647010	1398125244754	8	MONITORING DATA	STACI POINT EMISS

Chemicals Released via Underground Injection

There was no data of this type reported for this facility.

Chemicals Released to Land

There was no data of this type reported for this facility.

Chemicals Released to Surface Water

There was no data of this type reported for this facility.

Additional Information can be obtained from the Toxics Release Inventory System TRIS Query.

The Environmental Defense Fund's (EDF) Chemical Scorecard has on-line environmental information regarding this EXIT EPA facility's reported TRI releases. This information resource is not maintained, managed, or owned by the Environmental Protection Agency (EPA) or the Envirofacts Support Team. Neither the EPA nor the Envirofacts Support Team is responsible for their content or site operation. The Envirofacts Warehouse provides this reference only as a convenience to our Internet users.

RCRIS Information

HANDLER ID: GAD984318899

Standard Industrial Classification:

There were no SIC Codes reported to EPA for this facility.

Handler/Facility Classification:

HANDLER TYPE	LAND DISPOSAL	INCINERATOR	BOILER AND/OR INDUSTRIAL FURNACE	STORAGE AND TREATMENT
LARGE QTY GENERATOR				

Additional Information can be obtained from Resource Conservation and Recovery Information System RCRIS Query.

BRS Information

Facility Information:

HANDLER ID:	GAD984318899	**REPORTING YEAR:**	1997
GENERATOR STATUS:	1 = LQG	**ONSITE PERMITTED STORAGE:**	1 = No RCRA Storage
ONSITE PERMITTED TREATMENT:	1 = NO TDR/NO RCRA PLAN	**ONSITE EXEMPT TREATMENT:**	=

Waste Information:

Note: Please note that the wastes shown in the following table are in tons.

WASTE TYPE	STATE WASTE	FEDERAL WASTE	TOTAL WASTE
INCERNATION			
DISPOSAL			
ACUTE GENERATION			
WASTE SHIPPED	563	563	563
GENERATION	563	563	563
WASTE RECEIVED			
MANAGEMENT			

Additional information can be obtained from the Biennial Reporting System BRS Query.

RMP Information (RMP)

RMP FACILITY ID:	100000149109	**LAST POSTMARK DATE:**	21-JUN-1999
LAST RECEIPT DATE:	25-JUN-1999	**RMP COMPLETE?:**	YES
DEREGISTRATION DATE:		**PHONE NUMBER:**	7704878888
E-MAIL ADDRESS:		**WEB ADDRESS:**	www.photocircuits.com
LEPC:	Fayette County LEPC	**REPORTABLE ACCIDENTS REPORTED?:**	YES

PROCESS INFORMATION:

NAICS CODES	NAICS NAMES	PROGRAM LEVEL
334412		3

CHEMICAL NAME	CAS NUMBER	FLAMMABLE TOXIC
Chlorine	7782-50-5	T

Additional Information can be obtained from Risk Management Plans Infomation RMP Query.

Reference 6

FACTS & FIGURES

Peachtree City, Georgia, established in 1959, is a master-planned city situated southwest of Atlanta. The city features a host of amenities, including three golf courses, two lakes, a 2,200 seat amphitheater, a state-of-the-art tennis center, an indoor swimming complex and numerous other recreational facilities. Peachtree City's unique system of paved recreational paths is enjoyed by pedestrians, bicycles, and golf carts. The 70-mile network of paths connects neighborhoods, retail centers, churches, schools and recreation areas, using tunnels and bridges to safely cross major thoroughfares.

Encompassing 15,637 acres, or approximately 24 square miles, Peachtree City is geographically located in northwestern Georgia and is found in Fayette County, which is bordered on the north by Fulton County, on the east by Clayton County, on the south by Spalding County, and on the west by Coweta County. It is situated about 15 miles south of the City limits of Atlanta and is considered part of the Metro Atlanta area. Cities and towns near Peachtree City include Fayetteville, Brooks, Tyrone and Woolsey in Fayette County, and Sharpsburg, Senoia and Newnan in Coweta County. From a long-range planning and services coordination standpoint, the City is a member of the Atlanta Regional Commission.

PHYSICAL CHARACTERISTICS

Average rainfall is 48.61 inches per year

Average temperatures:
87 degrees (summer)
34 degrees (winter)
61.4 degrees (year round)

Land elevations range 740 to 961 feet above sea level.

The general terrain of the area is characteristic of the Piedmont region of Georgia. One will find hills with broad ridges, sloping uplands and relatively narrow valleys.

TRANSPORTATION

Peachtree City residents enjoy ready access to Interstates-75 and -85 and State Highways 54 and 74 pass through the community. Peachtree City also has convenient access to Hartsfield Atlanta International Airport, which, according to the City of Atlanta Department of Aviation, was busiest passenger airport in the world in 1998. For any business that might have a need to move freight, there is direct railway service provided by CSX (Chessie Seaboard Railroad), which serves as a link to the Southeast. Other modes of transportation include Peachtree City Falcon Field Airport, which is located on the western fringes of Peachtree City, making it possible for executive aircraft to taxi virtually to the office door. The 5,220 foot lighted runway field accommodates about 300 planes and at buildout is expected to have the ability to serve over 500 planes.

LOCAL ECONOMIC CONDITION AND OUTLOOK

Peachtree City is one of the most affluent communities in Georgia and continues to benefit economically by being an integral part of Metropolitan Atlanta. The Metro Atlanta region represents one of the nation's primary transportation, distribution, financial and consumer centers in the Southeast. Economists are projecting that the Atlanta area will continue to flourish and expand into the twenty-first century, with the metropolitan area possibly extending as far north as Chattanooga and as far south as Macon by the year 2010. Peachtree City is well positioned geographically within this growth area and, although the municipality's residential growth is nearing completion, will continue to benefit through growth in the commercial and industrial sectors.

Peachtree City is located in Fayette County, whose average unemployment figure of 2.5 percent in 1998 compared quite favorably to the 4.1 percent rate for the State of Georgia and the national average of 4.4 percent for the same time period. As might be expected from having such a large number of employed residents, the results from the 1990 census indicate that the citizens of Peachtree City are among the more affluent in the country. In fact, Fayette County, with a median income of $53,845 in 1990, ranked first in the State followed by two other Metro Atlanta counties, Cobb and Gwinnett, which were second and third, respectively. This median income placed Fayette County twenty-fourth in the national rankings among counties. In comparison, Peachtree City's median income was $57,237 in 1990, which was 6.3 percent higher than the county's median income.

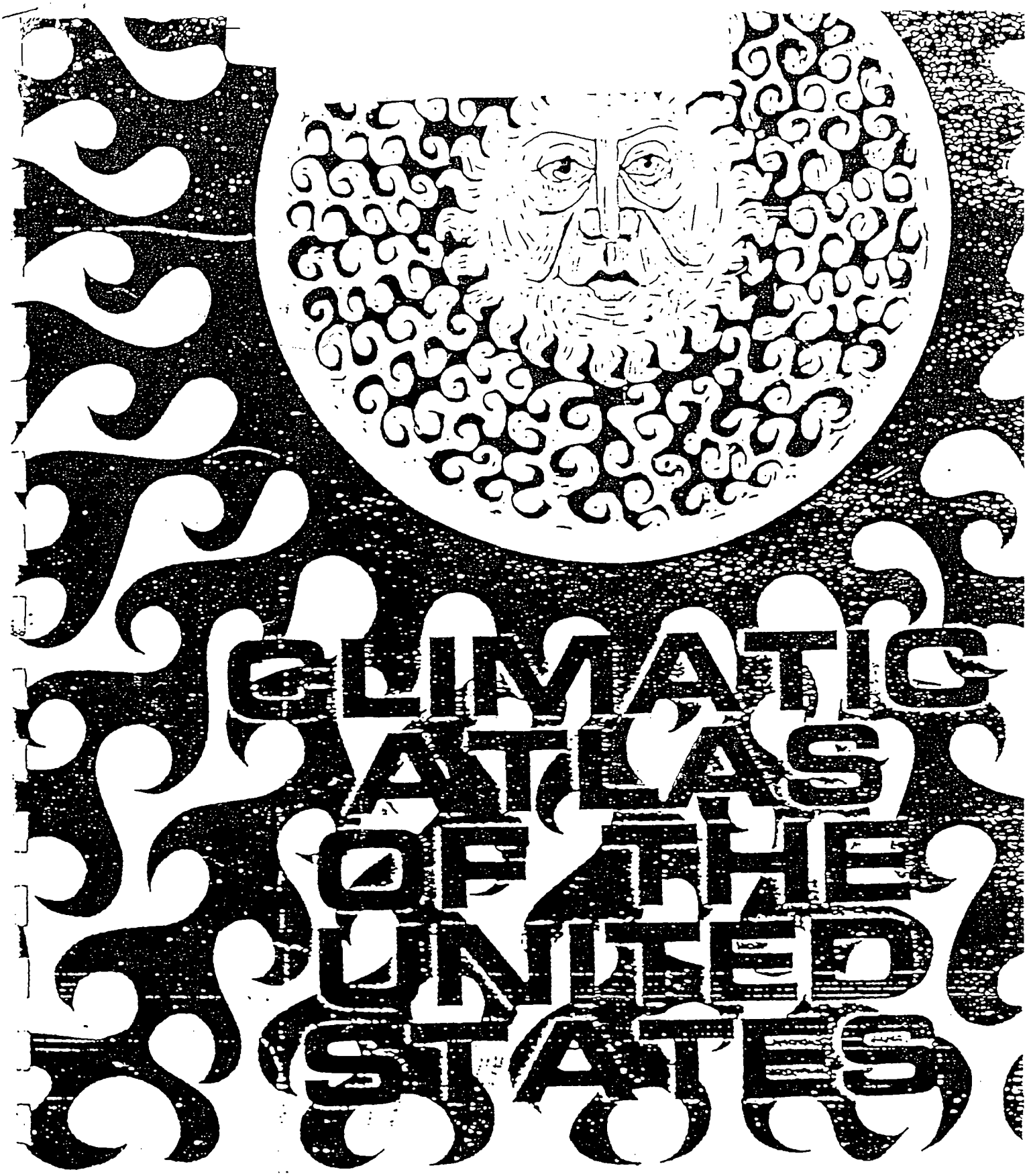
Peachtree City continues to be encouraged by a positive track record in home construction. A total of 306 single and multi-family residential units were developed in 1998, down slightly from the 386 units developed in 1997. Residential development plans for 1999 included the construction of approximately 240 single-family homes to be located in several of the existing developments, as well as the new Peninsula on Lake Kedron. Additionally, development is expected to begin on two apartment communities, totaling 616 units. Approximately 110 of these apartments should become available this year.

Peachtree City's industrial park is situated along the City's western boundaries. Of the nearly 2,161 acres set aside for industrial use, approximately 1200 acres are still available for future industrial growth. Peachtree City's industry and commercial businesses provide a significant tax base (i.e., 36 percent of the total assessed taxes paid in the 1998 Fiscal year). In Peachtree City alone, more than 6,200 people are employed at more than 55 local industrial companies, including international businesses such as Hella, Inc. and Wilden Plastics from Germany, Panasonic, TDK and Hoshizaki from Japan, Triumph Motorcycles from the United Kingdom, Lawson Mardon from Canada, and Megadoor from Sweden. Other commercial sectors such as finance, banking, retailing, real estate and health care augment this base work force.

Commercial development plans for 1999 include the development of additional retail space at Marketplace and The Avenue, restaurants such as Chili's, Don Pablo's and On the Border, a NAPA Auto Parts Store, a Sherwin Williams store,

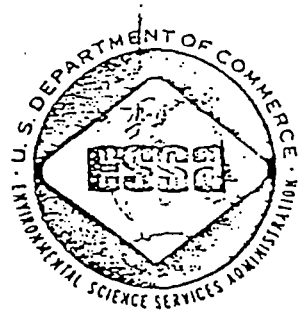
and a Home Depot in the second phase of Kedron Shopping Center.

Ref. 7



CLIMATIC ATLAS OF THE UNITED STATES

onmental Science Services Administration . Environment



U.S. DEPARTMENT OF COMMERCE

C. R. Smith, Secretary

ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION

Robert M. White, Administrator

ENVIRONMENTAL DATA SERVICE

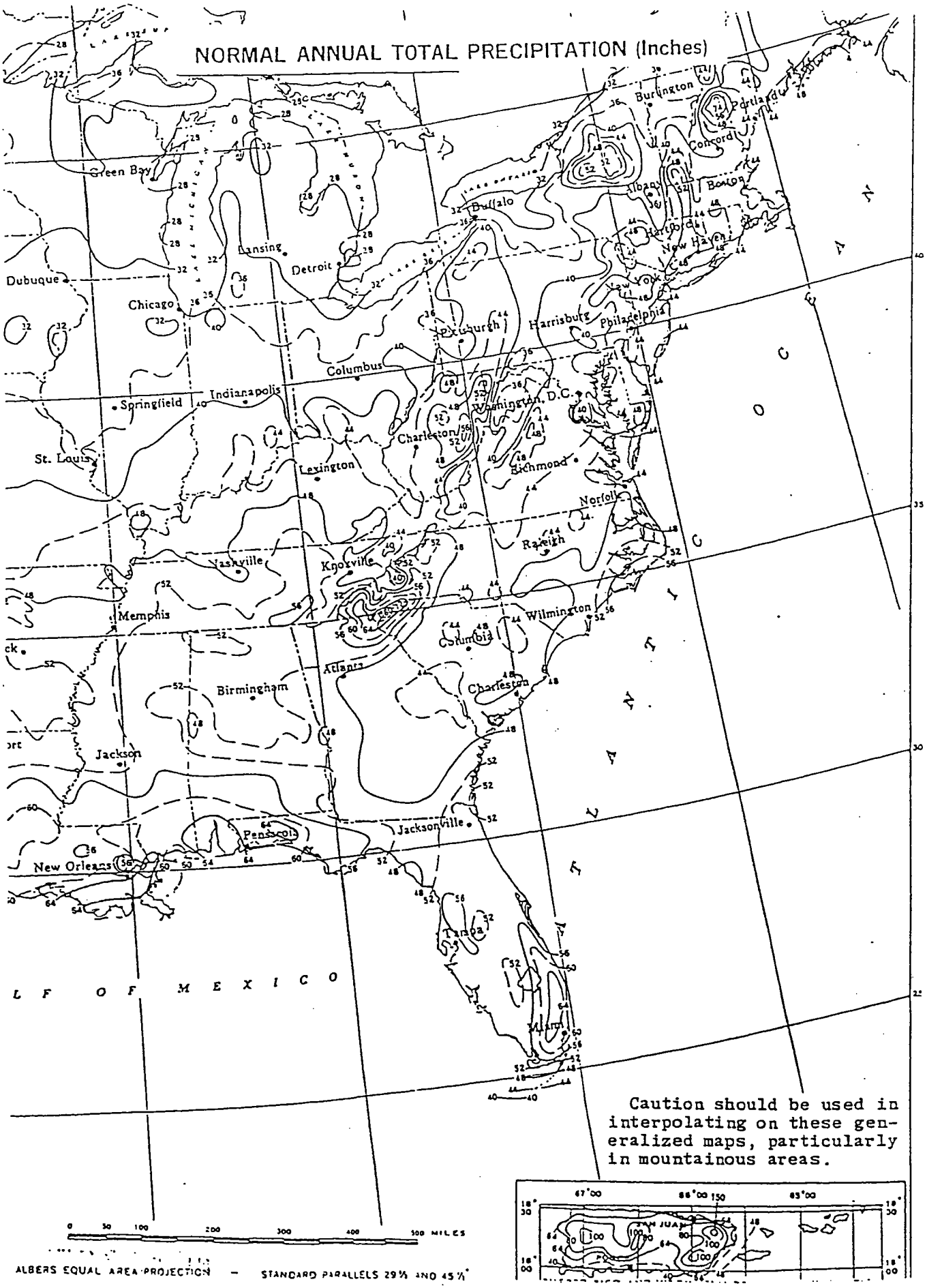
Woodrow C. Jacobs, Director

JUNE 1968

REPRINTED BY THE

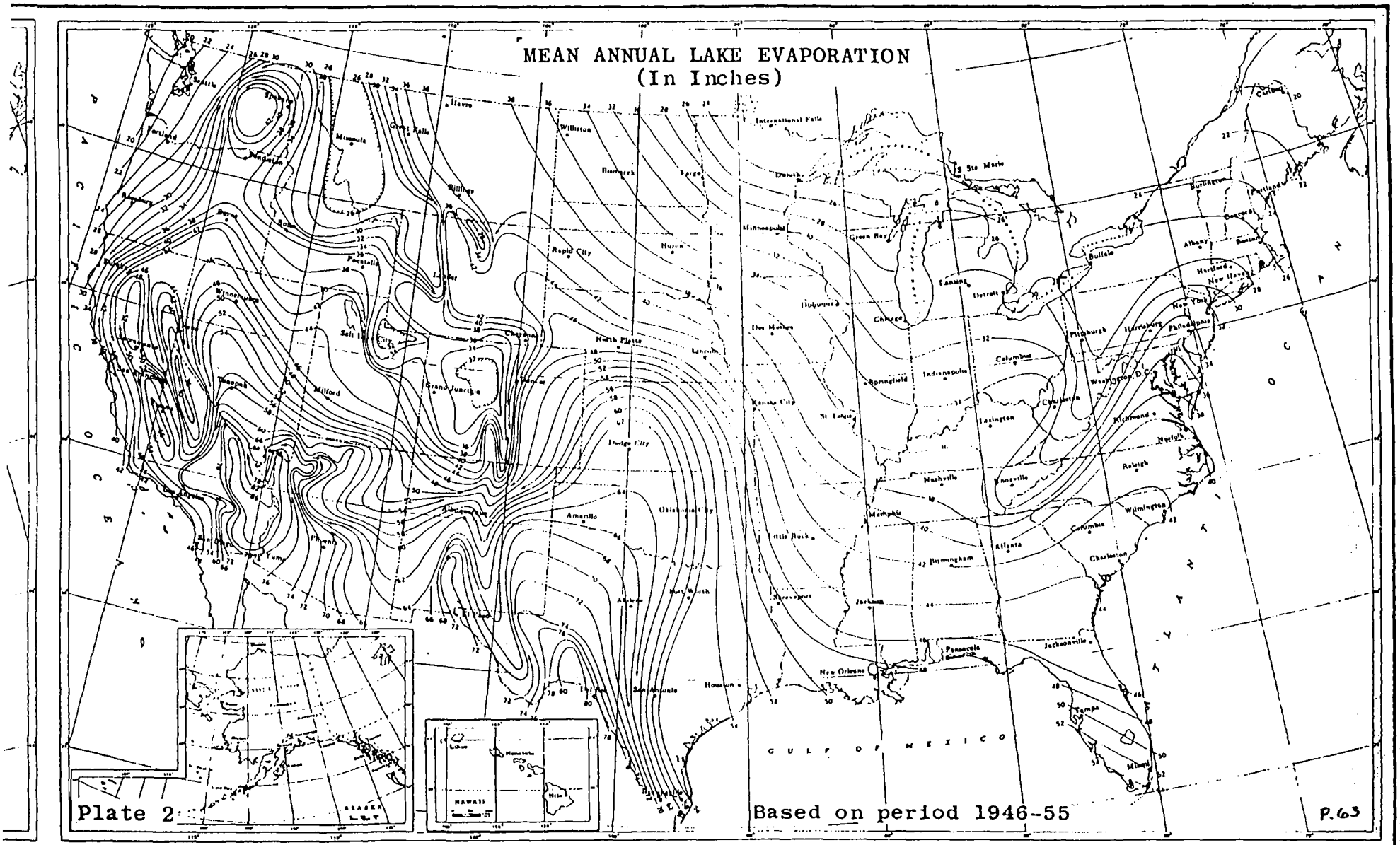
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

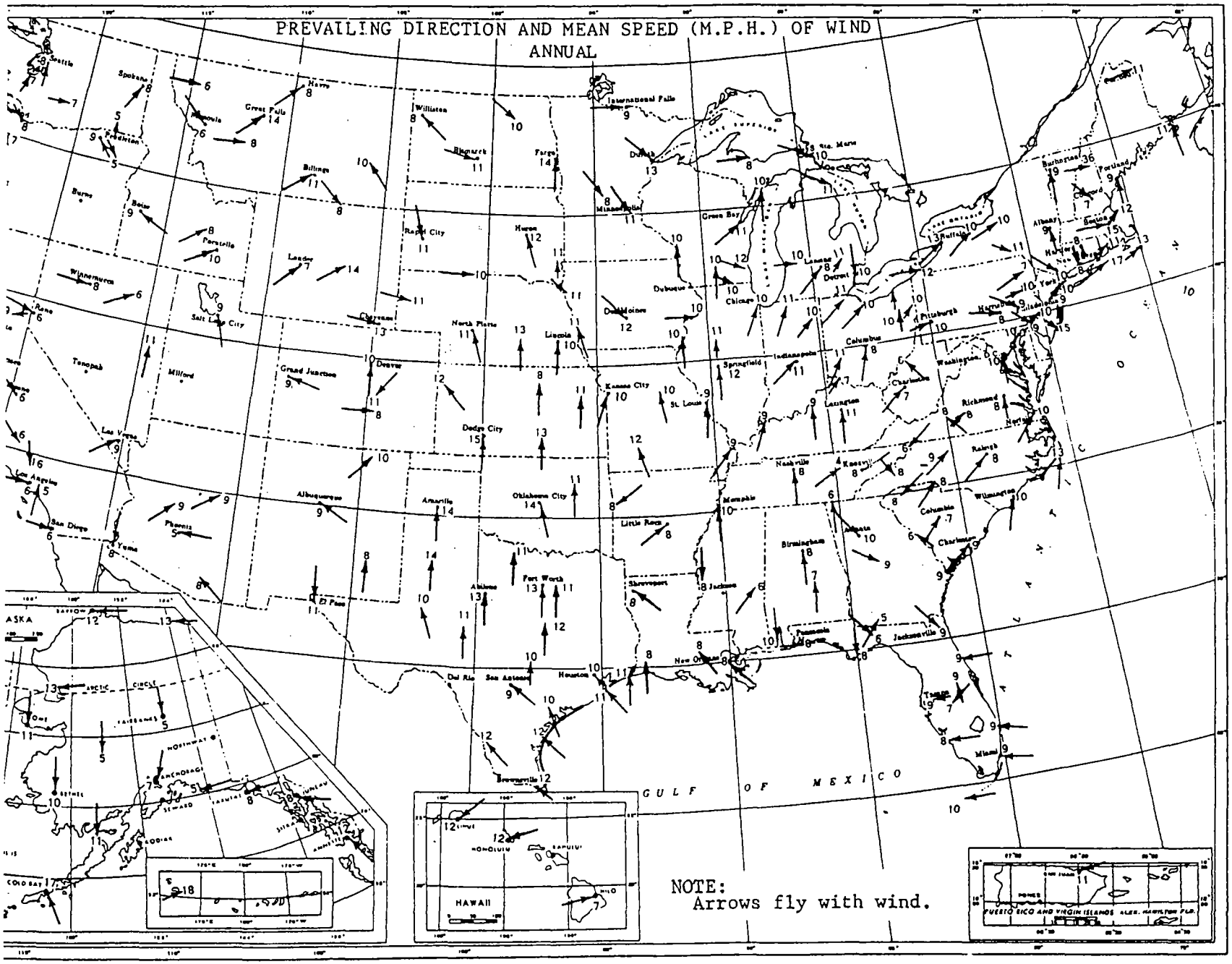
1983



Caution should be used in interpolating on these generalized maps, particularly in mountainous areas.

LAKE EVAPORATION





FASTEST MILE AND DIRECTION OF WIND

STATE & STATION	YRS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YEAR
FLA. (CON'T) MIAMI	51	50	68	53	70	48	48	52	62	132	122	94	52	132
		SW	SE	S	N	SW	NE	SE	SW	E	S	SE	S	E
MICH. (CON'T) DETROIT	28	57	49	68	56	61	56	77	50	52	56	66	59	77
		SW	W	SW	N	NW	SW	NW	SW	S	W	NW	W	NW
ESCANABA	30	52	56	68	47	57	50	49	43	47	52	56	47	68

FASTEST MILE AND DIR

STATE & STATION	YRS	JAN	FEB	MAR
N.Y. (CON'T) ROCHESTER	51	73	66	65
		W	W	W
SYRACUSE	50	56	61	59
		SW	W	SW
N. C. ASHEVILLE	50	52	43	44
		-	NW	SE
CAPE HATTERAS	50	76	68	68
		SW	S	W
CHARLOTTE	50	57	54	47
		SW	SW	W
GREENSBORO	33	40	51	54
		NW	W	SW
RALEIGH	41	50	66	59
		SW	SW	SW
WILMINGTON	49	57	66	56
		S	SW	SW
WINSTON-SALEM	8	40	46	45
		SSE	WSW	W
N. DAK. BISMARCK	87	70	54	65
		NW	NW	NW
DEVILS LAKE	57	41	54	54
		NW	N	N
FARGO	41	57	56	56
		W	W	N
WILLISTON	34	38	37	43
		W	SE	W
OHIO CINCINNATI	40	49	49	49
		SW	SW	SW
CLEVELAND	31	71	65	74
		W	SW	W
COLUMBUS	59	63	58	66
		NW	SW	SW
DAYTON	47	60	72	75
		NW	SW	W
SANDUSKY	84	56	64	65
		SW	NE	SW
TOLEDO	50	66	69	87
		SW	SW	SW
OKLA. OKLA. CITY	47	63	61	61
		W	W	S
TULSA	19	55	50	51
		SW	N	SW
OREG. PORTLAND	50	54	61	50
		S	SW	S
ROSEBURG	9	34	38	27
		SW	SW	SW
PA. ERIE	42	56	57	60
		SE	W	SW
HARRISBURG	50	47	60	68
		W	-	W
PHILADELPHIA	50	62	59	61
		N	NW	S
PITTSBURGH	79	67	58	72
		NW	NW	W
READING	49	84	79	85
		SE	NW	NW
SCRANTON	17	42	40	42
		N	W	W
R. I. BLOCK ISLAND	70	69	66	90
		NW	SE	E
PROVIDENCE	49	70	63	69
		NW	SW	NW
S. C. CHARLESTON	47	61	52	72
		-	NW	-
COLUMBIA	41	54	47	54
		SW	W	SW
GREENVILLE	18	73	56	63
		NE	NE	NE
S. DAK. HURON	29	57	56	66
		NW	NW	NW
RAPID CITY	50	73	75	72
		NW	NW	NW
TENN. CHATTANOOGA	63	58	63	82
		SW	W	-
KNOXVILLE	50	60	61	61
		SW	SW	SW
MEMPHIS	50	56	51	54
		-	-	-
NASHVILLE	50	56	57	70
		SW	-	NW
TEXAS. ABILENE	49	52	60	72
		NW	N	-
AMARILLO	70	62	70	72
		NE	NW	-
AUSTIN	35	44	57	41
		N	N	NW
BROWNSVILLE	39	51	56	42
		S	NW	-
CORPUS CHRISTI	75	59	50	52
		NW	SE	-
DALLAS	48	66	61	52
		SW	SW	-
EL PASO	63	61	69	72
		SW	W	SW
FORT WORTH	38	61	61	52
		SW	W	-
GALVESTON	66	53	60	52
		S	N	SW
HOUSTON	52	50	53	82
		NW	SE	NW
LAREDO	11	45	39	42
		NW	NW	W

U.S. DEPARTMENT OF COMMERCE
LUTHER H. HODGES, Secretary

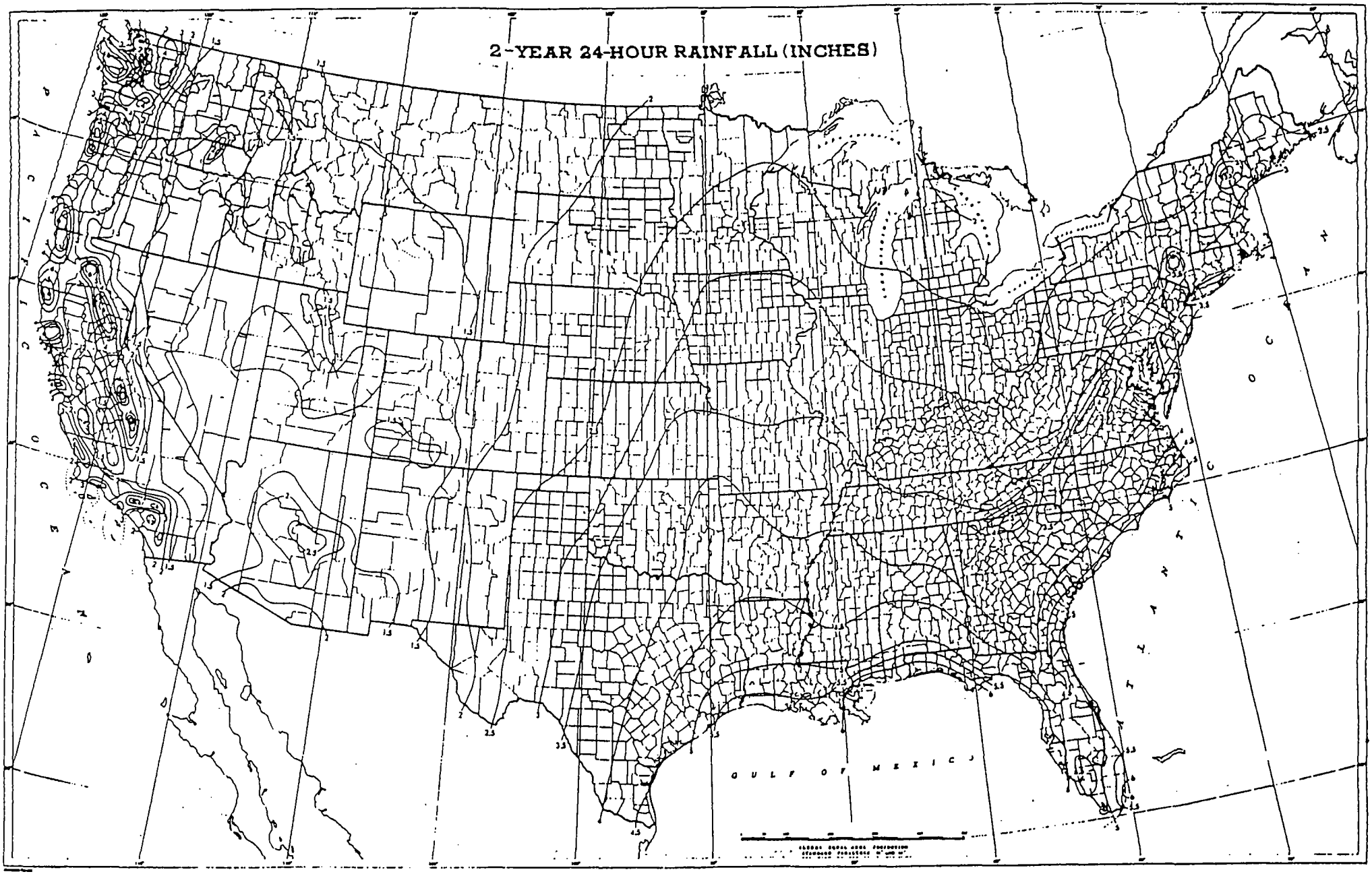
F. W. REICHELDERFER, Chi

TECHNICAL PAPER NO. 40

RAINFALL FREQUENCY ATLAS OF THE UNITED STATES

for Durations from 30 Minutes to 24 Hours and Return Periods from 1 to 100 Years

Prepared by
DAVID M. HERSHFIELD
Cooperative Studies Section, Hydrologic Services Division
for
Engineering Division, Soil Conservation Service
U.S. Department of Agriculture


2-YEAR 24-HOUR RAINFALL (INCHES)
GULF OF MEXICO

EPA United States Environmental Protection Agency

Envirofacts Warehouse | Superfund | Report Error | Overview | Law | EXIT EPA | Query | Model | Feedback | EF Home

CERCLIS Query Results

SITE ID: Equal To: **0401625**
Results are based on data extracted on FEB-07-2001
Note: Click on the underlined CORPORATE LINK value for links to that company's environmental web pages. Click on the underlined MAPPING INFO value to obtain mapping information for the facility. Click on the underlined RECORD OF DECISION value for a RODS Site Report. Click on the underlined FACILITY_ID to view EPA Facility Information for this site.

Go To Bottom Of The Page

SUPERFUND SITE ID:	0401625	**SITE NAME:**	PHOTOCIRCUITS ATLANTA INC
STREET ADDRESS:	350 DIVIDEND DR	**EPA FACILITY ID:**	GAD095811162
CITY NAME:	PEACHTREE CITY	**OWNERSHIP STATUS:**	Other
STATE ABBR:	GA	**FEDERAL FACILITY:**	N
ZIP CODE:	30269	**NPL STATUS:**	Not on the NPL
COUNTY NAME:	FAYETTE	**SITE INCIDENT TYPE:**	
CORPORATE LINK:	No	**RECORD OF DECISION (ROD) INFO:**	No
LATITUDE:		**EPA REGIONAL LINK:**	No

Reference 9

LONGITUDE: **MAPPING INFO:** MAP

SITE SMSA: 0520

Enforcement and Cleanup Actions

Action	Action ID	Planned Start Date	Planned End Date	Actual Start Date	Actual End Date	Responsibility	Planned Outcome	Urgency
SITE INSPECTION	001				06/12/1989	State, Fund Financed	Deferred to RCRA (Subtitle C)	
PRELIMINARY ASSESSMENT	001				12/30/1985	State, Fund Financed	Low	
DISCOVERY	001				08/01/1980	EPA Fund-Financed		

Site Description

There were no Site Descriptions reported for this site.

Go To Top Of The Page

Total Number of Facilities Displayed: 1

Reference 10

EPA United States Environmental Protection Agency

Envirofacts Warehouse | Hazardous Waste Data | Report Error

Overview | Law | EXIT EPA | Query | Model | Feedback | EF Home

RCRIS Query Results

HANDLER ID: Equal To: **GAD095811162**
Results are based on data extracted on JUN-22-2000
Note: Click on the underlined CORPORATE LINK value for links to that company's environmental web pages. Click on the underlined MAPPING INFO value to obtain mapping information for the facility. Click on the underlined FACILITY ID value to view EPA Facility information for the facility.

Go To Bottom Of The Page

HANDLER NAME:	PHOTOCIRCUITS CORP	HANDLER ID:	GAD095811162
STREET:	350 DIVIDEND DRIVE	FACILITY ID:	GAD095811162
CITY:	PEACHTREE CITY	CORPORATE LINK:	No
STATE:	GA	COUNTY:	FAYETTE
ZIP CODE:	30269	MAPPING INFO:	MAP
EPA REGION:	4		

Contact Information

Name	Street	City	State	ZIP Code	Phone	Type of Information
OLSON DAVIS	350 DIVIDEND DRIVE	PEACHTREE CITY	GA	30269	(404) 487-8888	Part A Data - Core
QUAKENBUSH WENDELL	350 DIVIDEND DRIVE	PEACHTREE CITY	GA	30269	(404) 487-8888	Notification Data - Core

Handler/Facility Classification

Handler Type	Land Disposal	Incinerator	Boiler and/or Industrial Furnace	Storage and Treatment
LARGE QTY GENERATOR				

Go To Top Of The Page

Total Number of Facilities Displayed: 1

Reference 11

EPA United States Environmental Protection Agency

Envirofacts Warehouse | Queries | Report Error | EF Overview | Query | Model | Feedback | EF Home

ENVIROFACTS REPORT ON PHOTOCIRCUITS CORPORATION

350 DIVIDEND DR.
PEACHTREE CITY, GA 30269

Map this facility

Map this facility using one of Envirofact's mapping utilities.

EPA Facility Information

This query was executed on FEB-14-2001

Superfund Information (CERCLIS)

SUPERFUND SITE ID:	0401625	**SITE SMSA:**	0520
OWNERSHIP STATUS:	Other	**FEDERAL FACILITY:**	N
NPL STATUS:	Not on the NPL	**SITE INCIDENT TYPE:**	

Additional Information can be obtained from the Superfund CERCLIS Query.

Additional Superfund Site information may be obtained through EPA's Superfund web site. Their query pages provide an alternative method for retrieving Superfund Site information.

Toxic Releases for Reporting Year 1998

TRI FACILITY ID: 30269PHTCR350DI

SIC Codes for 1998

SIC CODE	SIC CODE DESCRIPTION
3672	PRINTED CIRCUIT BOARDS

Chemicals Transferred to other Sites

CHEMICAL NAME	TRI CHEM ID	DOCUMENT	RELEASE AMOUNTS LBS/YR	RELEASE BASIS CODE	TYPE OF WASTE MANAGEMENT	TRANSF NA
COPPER COMPOUNDS	N100	1398125244160	14	OTHER	INCINERATION/INSIGNIFICANT FUEL VALUE	RINECO
COPPER COMPOUNDS	N100	1398125244160	18	MONITORING DATA	INCINERATION/INSIGNIFICANT FUEL VALUE	SAVANN ENERGY CO.
COPPER COMPOUNDS	N100	1398125244160	188010	MONITORING DATA	METALS RECOVERY	WORLD RESOUR RECYCL FACILIT
COPPER COMPOUNDS	N100	1398125244160	391500	MONITORING DATA	OTHER REUSE OR RECOVERY	ENCYCL INC.
LEAD COMPOUNDS	N420	1398125244424	250	MONITORING DATA	INCINERATION/INSIGNIFICANT FUEL VALUE	RINECO

LEAD COMPOUNDS	N420	1398125244424	1361	MONITORING DATA	METALS RECOVERY	WORLD RESOUR RECYCL FACILIT

Chemicals Released to Air

CHEMICAL NAME	TRI CHEM ID	DOCUMENT	RELEASE AMOUNTS LBS/YR	RELEASE BASIS CODE	FUGITIVE OR STACK INDICATOR
CHLORINE	007782505	1398125244602	5	OTHER	FUGITIVE OR NON-POINT EMISSIONS
CHLORINE	007782505	1398125244602	250	MONITORING DATA	STACK OR POINT EMISSIONS
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY)	007647010	1398125244715	5	OTHER	FUGITIVE OR NON-POINT EMISSIONS
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY)	007647010	1398125244715	3206	MONITORING DATA	STACK OR POINT EMISSIONS
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY)	007664939	1398125244677	250	OTHER	STACK OR POINT EMISSIONS
TOLUENE	000108883	1398125244638	1704	MONITORING DATA	FUGITIVE OR NON-POINT EMISSIONS

TOLUENE	000108883	1398125244638	5112	MONITORING DATA	STACK OR POINT EMISSIONS

Chemicals Released via Underground Injection

There was no data of this type reported for this facility.

Chemicals Released to Land

There was no data of this type reported for this facility.

Chemicals Released to Surface Water

There was no data of this type reported for this facility.

Additional Information can be obtained from the Toxics Release Inventory System TRIS Query.

The Environmental Defense Fund's (EDF) Chemical Scorecard has on-line environmental information regarding this EXIT EPA facility's reported TRI releases. This information resource is not maintained, managed, or owned by the Environmental Protection Agency (EPA) or the Envirofacts Support Team. Neither the EPA nor the Envirofacts Support Team is responsible for their content or site operation. The Envirofacts Warehouse provides this reference only as a convenience to our Internet users.

AIRS / AFS Information

PLANT NAME:	PHOTOCIRCUITS ATLANTA	**COMPLIANCE SYSTEM PLANT ID:**	
AFS PLANT ID:		**NATIONAL EMISSIONS DATA SYSTEM PLANT ID:**	0029

LATITUDE:	332256	**LONGITUDE:**	843456
DUNS NUMBER:		**PRINCIPAL PRODUCT:**	CIR. BOARD
INVENTORY YEAR:	90	**EMERGENCY CONTROL:**	
CLASS CODE:		**COMPLIANCE STATUS:**	

The current AIRS/AFS database does not have any pollutant data for this facility.

AIRS / AFS Information

PLANT NAME:	PHOTOCIRCUITS ATLANTA INC	**COMPLIANCE SYSTEM PLANT ID:**	00029
AFS PLANT ID:		**NATIONAL EMISSIONS DATA SYSTEM PLANT ID:**	
LATITUDE:	0	**LONGITUDE:**	0
DUNS NUMBER:	114381957	**PRINCIPAL PRODUCT:**	
INVENTORY YEAR:		**EMERGENCY CONTROL:**	
CLASS CODE:	POT EMISSIONS BELOW MAJR SOURCE THRESHOLDS IF COMPLIES WITH FED REGS/LIMITS	**COMPLIANCE STATUS:**	IN VIOLATION - NO SCHEDULE

List of Pollutant Information

POLLUTANT DESCRIPTION	POLLUTANT CODE	CAS NUMBER	ALLOWABLE EMISSIONS		ESTIMATED W/ RULE EFFECTIVENESS		ESTIMATED W/O RULE EFFECTIVENESS	
			VALUE	UNIT	VALUE	UNIT	VALUE	UNIT
OTHER EMISSIONS	OT							
VOLATILE ORG COMPNDS	VOC							

RCRIS Information

HANDLER ID: GAD095811162

Standard Industrial Classification:

SIC CODE	SIC DESCRIPTION
3679	ELECTRONIC COMPONENTS, NOT ELSEWHERE CLASSIFIED

Handler/Facility Classification:

HANDLER TYPE	LAND DISPOSAL	INCINERATOR	BOILER AND/OR INDUSTRIAL FURNACE	STORAGE AND TREATMENT
LARGE QTY GENERATOR				

Additional Information can be obtained from Resource Conservation and Recovery Information System RCRIS Query.

BRS Information

Facility Information:

HANDLER ID:	GAD095811162	**REPORTING YEAR:**	1997
GENERATOR STATUS:	1 = LQG	**ONSITE PERMITTED STORAGE:**	1 = No RCRA Storage
ONSITE PERMITTED TREATMENT:	1 = NO TDR/NO RCRA PLAN	**ONSITE EXEMPT TREATMENT:**	=

Waste Information:

Note: Please note that the wastes shown in the following table are in tons.

WASTE TYPE	STATE WASTE	FEDERAL WASTE	TOTAL WASTE
INCERNATION			
ACUTE GENERATION			
DISPOSAL			
WASTE SHIPPED	4238	4238	4238
GENERATION	4238	4238	4238
MANAGEMENT			
WASTE RECEIVED			

Additional information can be obtained from the Biennial Reporting System BRS Query.

RMP Information (RMP)

RMP FACILITY ID:	100000136284	**LAST POSTMARK DATE:**	21-JUN-1999
LAST RECEIPT DATE:	24-JUN-1999	**RMP COMPLETE?:**	YES
DEREGISTRATION DATE:		**PHONE NUMBER:**	7704878888
E-MAIL ADDRESS:		**WEB ADDRESS:**	www.photocircuits.com
LEPC:	Fayette County LEPC	**REPORTABLE ACCIDENTS REPORTED?:**	NO

PROCESS INFORMATION:

NAICS CODES	NAICS NAMES	PROGRAM LEVEL
334412		3

CHEMICAL NAME	CAS NUMBER	FLAMMABLE TOXIC
Chlorine	7782-50-5	T

Additional Information can be obtained from Risk Management Plans Infomation RMP Query.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D095811162

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ☒ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS _____

CUBIC YARDS _____

NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☐ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	4,500	gallons	volume/month

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
MES	cupric chloride	7447-39-4	CP Chemicals		

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

GA EPD State Files.
Photocircuits-Atlanta, Inc., Peachtree City, GA.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D095811162

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION 03 POPULATION POTENTIALLY AFFECTED: _____	02 ☐ OBSERVED (DATE: _____) 04 NARRATIVE DESCRIPTION	☐ POTENTIAL	☐ ALLEGED
01 ☐ B. SURFACE WATER CONTAMINATION 03 POPULATION POTENTIALLY AFFECTED: _____	02 ☐ OBSERVED (DATE: _____) 04 NARRATIVE DESCRIPTION	☐ POTENTIAL	☐ ALLEGED
01 ☐ C. CONTAMINATION OF AIR 03 POPULATION POTENTIALLY AFFECTED: _____	02 ☐ OBSERVED (DATE: _____) 04 NARRATIVE DESCRIPTION	☐ POTENTIAL	☐ ALLEGED
01 ☐ D. FIRE/EXPLOSIVE CONDITIONS 03 POPULATION POTENTIALLY AFFECTED: _____	02 ☐ OBSERVED (DATE: _____) 04 NARRATIVE DESCRIPTION	☐ POTENTIAL	☐ ALLEGED
01 ☐ E. DIRECT CONTACT 03 POPULATION POTENTIALLY AFFECTED: _____	02 ☐ OBSERVED (DATE: _____) 04 NARRATIVE DESCRIPTION	☐ POTENTIAL	☐ ALLEGED
01 ☐ F. CONTAMINATION OF SOIL 03 AREA POTENTIALLY AFFECTED: _____ (Acres)	02 ☐ OBSERVED (DATE: _____) 04 NARRATIVE DESCRIPTION	☐ POTENTIAL	☐ ALLEGED
01 ☐ G. DRINKING WATER CONTAMINATION 03 POPULATION POTENTIALLY AFFECTED: _____	02 ☐ OBSERVED (DATE: _____) 04 NARRATIVE DESCRIPTION	☐ POTENTIAL	☐ ALLEGED
01 ☐ H. WORKER EXPOSURE/INJURY 03 WORKERS POTENTIALLY AFFECTED: _____	02 ☐ OBSERVED (DATE: _____) 04 NARRATIVE DESCRIPTION	☐ POTENTIAL	☐ ALLEGED
01 ☐ I. POPULATION EXPOSURE/INJURY 03 POPULATION POTENTIALLY AFFECTED: _____	02 ☐ OBSERVED (DATE: _____) 04 NARRATIVE DESCRIPTION	☐ POTENTIAL	☐ ALLEGED

Please print or type in the unshaded areas only
(light-shaded areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-S80004

FORM 3 RCRA

U.S. ENVIRONMENTAL PROTECTION AGENCY
HAZARDOUS WASTE PERMIT APPLICATION
Consolidated Permits Program
(This information is required under Section 3005 of RCRA.)

I. EPA I.D. NUMBER: F G A D 0 9 5 8 1 1 1 6 2

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

[ ] 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

C 8 | YR. | MO. | DAY

[ ] 2. NEW FACILITY *(Complete item below.)*

FOR NEW FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN

YR. | MO. | DAY

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

[X] 1. FACILITY HAS INTERIM STATUS

[ ] 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES – CODES AND DESIGN CAPACITIES

A. PROCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the form *(Item III-C)*.

B. PROCESS DESIGN CAPACITY – For each code entered in column A enter the capacity of the process.
1. AMOUNT – Enter the amount.
2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below)*: A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

C DUP T/A C 1

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S02	600	G		5				
X-2	T03	20	E		6				
1	S01	55ea.	G		7				
2	S01	1.3ea.	Y		8				
3	S02	11,500	G		9				
4					10				

Continued from the front.

III. PROCESSES *(continued)*

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES *(code "T04")*. FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

IV. DESCRIPTION OF HAZARDOUS WASTES

A. **EPA HAZARDOUS WASTE NUMBER** – Enter the four–digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four–digit number*(s)* from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. **ESTIMATED ANNUAL QUANTITY** – For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non–listed waste*(s)* that will be handled which possess that characteristic or contaminant.

C. **UNIT OF MEASURE** – For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. **PROCESSES**

1. PROCESS CODES:
   For listed hazardous waste: For each listed hazardous waste entered in column A select the code*(s)* from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.
   For non–listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code*(s)* from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non–listed hazardous wastes that possess that characteristic or toxic contaminant.
   Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code*(s)*.

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER – Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* – A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non–listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARD. WASTE NO (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				*included with above*

Continued from page 2.

NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

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EPA I.D. NUMBER (enter from page 1)														FOR OFFICIAL USE ONLY												
W	G	A	D	0	9	5	8	1	1	1	6	2		1	W	DUP										2	DUP

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD. WASTE NO (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)				D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
1	F001	10,000	P	S01	S02	T04		Distillation
2	F002	13	T	S01	S02	T04		Distillation
3	F006	236	T	S01				
4	F007	3000	G	S01	T01			
5	F008	1000	G	S01				
6	F009	1000	G	S01	T01			
7								
8								
9								
10								
11								
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19								
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21								
22								
23								
24								
25								
26								

Continued from the front.

IV. DESCRIPTION OF HAZARDOUS WASTES *(continued)*

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

EPA I.D. NO. *(enter from page 1)*

F	G	A	D	0	9	5	8	1	1	1	6	2		6

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*
70 18 46 W	02 15 42 E

VIII. FACILITY OWNER

☐ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*
E KOLLMORGEN CORPORATION	203-547-0600

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE
F 66 Gate House Road	G Stamford	CT	06902

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED

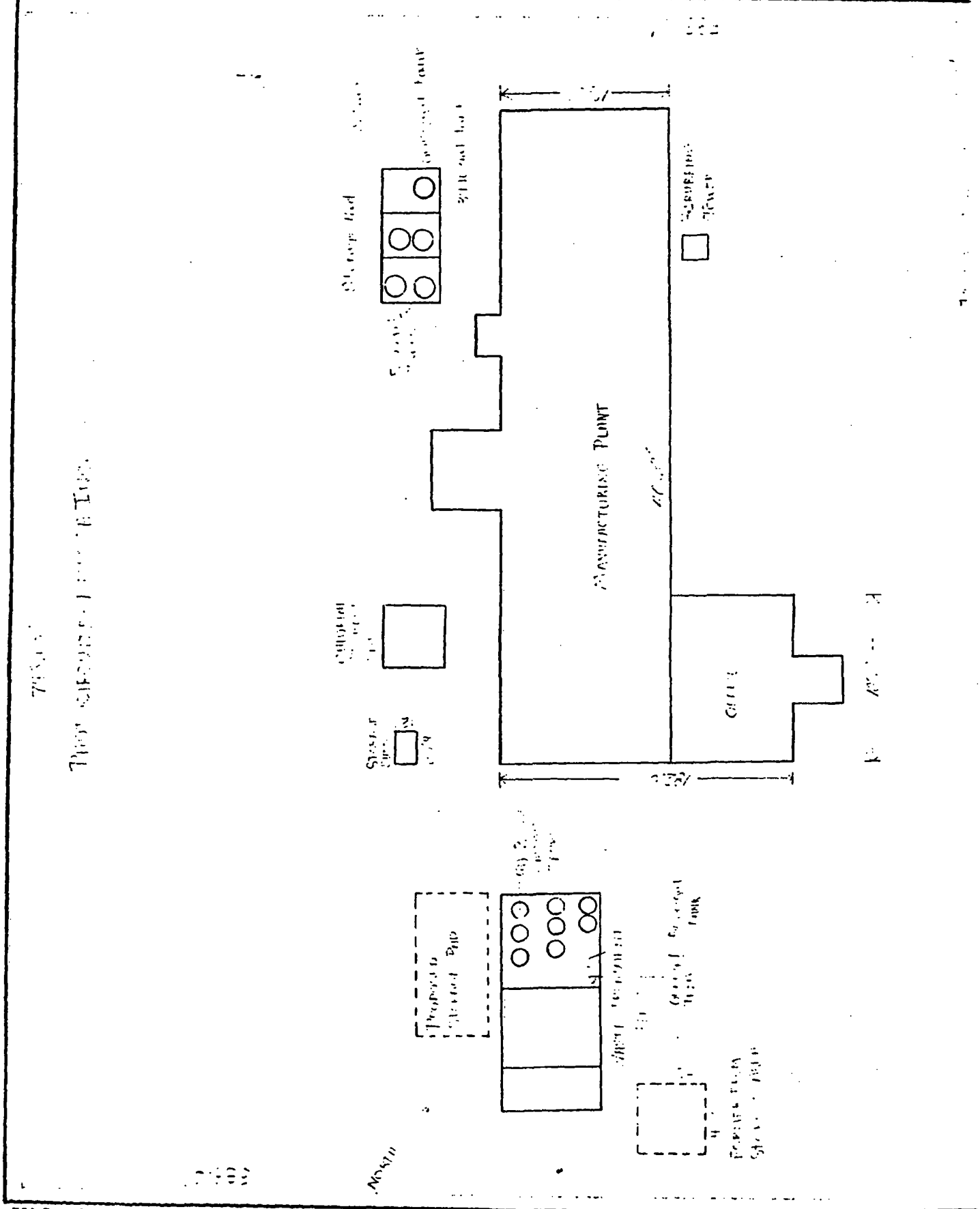
X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED
Chuck Marquardt		9/8/82

Form Approved OMB No. 158-S80004

V. FACILITY DRAWING *(see page 4)*



Reference 14

EPA United States Environmental Protection Agency

Envirofacts Warehouse | Toxics Release Inventory | Report Error

EZ Query | Batch Reports | Form R Reports

Overview | Law | EXIT EPA | Customized Query | State Reports | Query | Model | Feedback | EF Home

Envirofacts TRIS Report

Query executed on 28-FEB-2001
Results are based on data extracted on 28-FEB-2001

Click on the underlined EPA FACILITY ID value to view EPA Facility information for the facility.

Facility Name:	PHOTOCIRCUITS CORP.	Mailing Name:	PHOTOCIRCUITS CORP.		
Address:	350 DIVIDEND DR. PEACHTREE CITY GA 30269	Mailing Address:	350 DIVIDEND DR. PEACHTREE CITY GA 30269		
County:	FAYETTE	Region:	4		
EPA FACILITY ID:	GAD095811162	TRI ID:	30269PHTCR350DI	DUNS Number:	152087847
TRI Preferred Latitude:	33.39	TRI Preferred Longitude:	84.589167		
Public Contact:	RON MCHATTON	Phone:	7704862303		
Parent Company:	PHOTOCIRCUITS CORP.	Parent DUNS:	152087847		

SIC Codes for 1998

SIC CODE	SIC DESCRIPTION
3672	PRINTED CIRCUIT BOARDS

The above information comes from 1998, which is the latest reporting year on file for this facility. The earliest reporting year on file for this facility is 1987.

Map this facility

Map this facility using one of Envirofact's mapping utilities.

Besides TRI, this facility also does the following:

- has reported air releases under the Clean Air Act
- has a current or archived Superfund Site Report
- handles hazardous waste

More information about these additional regulatory aspects of this facility can be found by pressing the other regulatory data button below.

Other Regulatory Data

Total Aggregate Releases of TRI Chemicals to the Environment:

Please note that all release amounts are reported in pounds. For all releases estimated as a range, the mid-point of the range was used in these calculations. This table summarizes the releases reported by the facility. ***NR*** *- signifies nothing reported by this facility for the corresponding medium.*

Media	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987
Air Emissions	10532	8952	8133	12692	30355	20510	15799	12010	1500	8550	1000	1000
Surface Water Discharges	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Releases to Land	NR	NR	NR	NR	NR	NR	NR	NR	NR	250	NR	NR
Underground Injection	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Total On-Site Releases	10532	8952	8133	12692	30355	20510	15799	12010	1500	8800	1000	1000
Transfer Off-Site to Disposal	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	58280
Total Releases	10532	8952	8133	12692	30355	20510	15799	12010	1500	8800	1000	59280

Graphic Summary of this Table

TRI Chemicals Reported on Form A:

Please note that there were no chemicals reported on Form A for this facility

All chemicals reported above have release or transfer amounts greater than zero. To see a list of all chemicals reported by this facility click here.

Names and Amounts of Chemicals Released to the Environment by Year.

Please note that all release amounts are reported in pounds. For all releases estimated as a range, the mid-point of the range was used in these calculations. ***NR*** *- signifies nothing reported for this facility by the corresponding medium. Rows with all "0" or "NR" values were not listed.*

Chemical Name	Media	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987
1,1,1-TRICHLOROETHANE (TRI Chemical ID: 000071556)	AIR STACK	NR	NR	NR	NR	NR	NR	NR	NR	NR	7300	NR	NR

CHLORINE (TRI Chemical ID: 007782505)	AIR FUG	5	5	350	750	750	250	250	250	250	250	250	250
CHLORINE (TRI Chemical ID: 007782505)	AIR STACK	250	250	450	750	750	750	250	250	250	NR	250	250
COPPER (TRI Chemical ID: 007440508)	DISP NON METALS	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	58030
COPPER COMPOUNDS (TRI Chemical ID: N100)	OTH DISP	NR	NR	NR	NR	NR	NR	NR	NR	NR	250	NR	NR
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	AIR FUG	5	NR	NR	NR	750	250	250	250	250	250	250	250
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	AIR STACK	3206	NR	NR	NR	750	250	250	250	250	250	250	250
LEAD (TRI Chemical ID: 007439921)	DISP NON METALS	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	250
NITRIC ACID (TRI Chemical ID: 007697372)	AIR FUG	NR	NR	NR	NR	NR	250	250	250	250	0	NR	NR
NITRIC ACID (TRI Chemical ID: 007697372)	AIR STACK	NR	NR	NR	NR	NR	250	250	250	250	250	NR	NR
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007664939)	AIR FUG	NR	NR	NR	NR	NR	5	5	5	NR	NR	NR	NR
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007664939)	AIR STACK	250	NR	NR	NR	NR	5	5	5	NR	250	NR	NR
TOLUENE (TRI Chemical ID: 000108883)	AIR FUG	1704	2174	1833	2798	6840	4625	14289	10500	NR	NR	NR	NR

TOLUENE (TRI Chemical ID: 000108883)	AIR STACK	5112	6523	5500	8394	20515	13875	NR	NR	NR	NR	NR	NR

Discharge of Chemicals into Streams or Bodies of Water:

Please note that there were no discharge of chemicals into streams or bodies of water for this facility for the years 1987 to 1999. Rows with Release Amount equal to "0" were not listed.

Transfer of Chemicals to Off-Site Locations other than POTWs:

Please note that transfer amounts are not included in release totals shown above. All transfer amounts are reported in pounds. For all releases estimated as a range, the mid-point of the range was used in these calculations. Rows with Total Transfer Amount equal to "0" were not listed.

Chemical Name	Year	Total Transfer Amount (Pounds)	Transfer Site Name and Address	Type Of Waste Management
CHLORINE (TRI Chemical ID: 007782505)	1988	198000	CP CHEMICALS HWY. 15 SOUTH INDUSTRIAL, PARK SUMTER, SC 29150	Other Waste Treatment
CHLORINE (TRI Chemical ID: 007782505)	1987	99300	CP CHEMICALS HIGHWAY 15 SOUTH INDUSTRIAL, PARK SUMTER, SC 29150	Other Waste Treatment

COPPER (TRI Chemical ID: 007440508)	1988	132025	WORLD RESOURCES PROCESSING CO. WALNUT LN. POTTSVILLE, PA 17901	Solidification/Stabilization
COPPER (TRI Chemical ID: 007440508)	1988	42070	CP CHEMICALS HWY. 15 SOUTH INDUSTRIAL, PARK SUMTER, SC 29150	Other Waste Treatment
COPPER (TRI Chemical ID: 007440508)	1987	58030	CECOS INTERNATIONAL 27004 SOUTH FROST ROAD LIVINGSTON, LA 70754	Landfill/Disposal Surface Impoundment
COPPER (TRI Chemical ID: 007440508)	1987	19550	WORLD RESOURCES PROCESSING CO. WALNUT LANE POTTSVILLE, PA 17901	Solidification/Stabilization
COPPER (TRI Chemical ID: 007440508)	1987	44620	CP CHEMICALS HIGHWAY 15 SOUTH INDUSTRIAL, PARK SUMTER, SC 29150	Other Waste Treatment
COPPER COMPOUNDS (TRI Chemical ID: N100)	1998	188010	WORLD RESOURCES CO. RECYCLING FACILITY WALNUT LN. RD. #5 BOX 5553 POTTSVILLE, PA 17901	Metals Recovery

COPPER COMPOUNDS (TRI Chemical ID: N100)	1998	14	RINECO 1007 VULCAN RD.-HASKELL BENTON, AR 72015	Incineration/Insignificant Fuel Value
COPPER COMPOUNDS (TRI Chemical ID: N100)	1998	18	SAVANNAH ENERGY SYS. CO. PRESIDENT ST. EXTENSION OFF KEMIRA RD. SAVANNAH, GA 31402	Incineration/Insignificant Fuel Value
COPPER COMPOUNDS (TRI Chemical ID: N100)	1998	391500	ENCYCLE/TEXAS INC. 5500 UP RIVER RD. CORPUS CHRISTI, TX 78407	Other Reuse or Recovery
COPPER COMPOUNDS (TRI Chemical ID: N100)	1997	149735	WORLD RESOURCES CO., RECYCLYING FACILITY WALNUT LANE, RD. #5, BOX 5553 POTTSVILLE, PA 17901	Metals Recovery
COPPER COMPOUNDS (TRI Chemical ID: N100)	1997	258506	OLD BRIDGE CHEMICALS,INC. OLD WATER WORKS RD. OLD BRIDGE, NJ 08857	Metals Recovery
COPPER COMPOUNDS (TRI Chemical ID: N100)	1997	90125	ENCYCLE / TEXAS INC. 5500 UP RIVER RD. CORPUS CHRISTI, TX 78407	Other Reuse or Recovery

COPPER COMPOUNDS (TRI Chemical ID: N100)	1997	250	RINECO 1007 VULCAN RD. - HASKELL BENTON, AR 72015	Incineration/Insignificant Fuel Value
COPPER COMPOUNDS (TRI Chemical ID: N100)	1996	189731	WORLD RESOURCES CO., RECYCLING FACILITY WALNUT LANE, RD. #5, BOX 5553 POTTSVILLE, PA 179019507	Metals Recovery
COPPER COMPOUNDS (TRI Chemical ID: N100)	1996	740189	OLD BRIDGE CHEMICALS INC. OLD WATERWORKS RD. OLD BRIDGE, NJ 08857	Metals Recovery
COPPER COMPOUNDS (TRI Chemical ID: N100)	1995	127060	WORLD RESOURCES CO. (RECYC, LING FACILITY) WALNUT LANE, RD. #5, BOX 5553 POTTSVILLE, PA 179019507	Metals Recovery
COPPER COMPOUNDS (TRI Chemical ID: N100)	1995	209522	OLD BRIDGE CHEMICALS INC. OLD WATERWORKS RD. OLD BRIDGE, NJ 08857	Metals Recovery
COPPER COMPOUNDS (TRI Chemical ID: N100)	1995	475090	PHIBRO-TECH INC. HWY. 74 SOUTH INDUSTRIAL PA, RK SUMTER, SC 29150	Metals Recovery

COPPER COMPOUNDS (TRI Chemical ID: N100)	1994	120517	WORLD RESOURCES CO. (RECYC, LING FACILITY) WALNUT LANE, RD.#5, BOX 5553 POTTSVILLE, PA 179019507	Metals Recovery
COPPER COMPOUNDS (TRI Chemical ID: N100)	1994	11571	OLD BRIDGE CHEMICALS INC. OLD WATERWORKS RD. OLD BRIDGE, NJ 08857	Metals Recovery
COPPER COMPOUNDS (TRI Chemical ID: N100)	1994	337344	PHIBRO-TECH INC. HWY. 15 SOUTH INDUSTRIAL PA, RK SUMTER, SC 29150	Metals Recovery
COPPER COMPOUNDS (TRI Chemical ID: N100)	1993	156405	WRC PROCESSING CO. WALNUT LN. RD. #5 BOX 5553 POTTSVILLE, PA 17901	Metals Recovery
COPPER COMPOUNDS (TRI Chemical ID: N100)	1993	330001	PHIBRO-TECH, (FORMERLY CP CHEMICALS) HWY. 15 S. INDUSTRIAL PARK SUMTER, SC 29150	Metals Recovery

COPPER COMPOUNDS (TRI Chemical ID: N100)	1992	94165	WRC PROCESSING CO. WALNUT LN. RD. #5 BOX 5553 POTTSVILLE, PA 17901	Metals Recovery
COPPER COMPOUNDS (TRI Chemical ID: N100)	1992	217437	CP CHEMICALS HWY. 15 SOUTH INDUSTRIAL PARK SUMTER, SC 29150	Metals Recovery
COPPER COMPOUNDS (TRI Chemical ID: N100)	1991	55805	WRC PROCESSING CO. WALNUT LN. RD. #5 BOX 5553 POTTVILLE, PA 17901	Metals Recovery
COPPER COMPOUNDS (TRI Chemical ID: N100)	1991	139146	CP CHEMICALS HWY. 15 SOUTH INDUSTRIAL PA, RK SUMTER, SC 29150	Metals Recovery
COPPER COMPOUNDS (TRI Chemical ID: N100)	1991	5151	OLD BRIDGE CHEMICALS INC. OLD WATERWORKS RD. OLD BRIDGE, NJ 08857	Metals Recovery
COPPER COMPOUNDS (TRI Chemical ID: N100)	1991	33692	SOUTHERN CALIFORNIA CHEMICAL 100 NORTH FIRST. ST. GARLAND, TX 75040	Metals Recovery

HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	1994	284849	PHIBRO-TECH INC. HWY. 15 SOUTH INDUSTRIAL PA, RK SUMTER, SC 29150	Other Reuse or Recovery
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	1994	9771	OLD BRIDGE CHEMICALS INC. OLD WATERWORKS RD. OLD BRIDGE, NJ 08857	Other Reuse or Recovery
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	1993	286861	PHIBRO-TECH INC. HWY. 15 S. INDUSTRIAL PARK SUMTER, SC 29150	Other Reuse or Recovery
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	1992	189560	CP CHEMICALS HWY. 15 SOUTH INDUSTRIAL PARK SUMTER, SC 29150	Other Reuse or Recovery
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	1991	114738	CP CHEMICALS HWY. 15 SOUTH INDUSTRIAL PA, RK SUMTER, SC 29150	Other Reuse or Recovery
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	1991	3860	OLD BRIDGE CHEMICALS INC. OLD WATERWORKS RD. OLD BRIDGE, NJ 08857	Other Waste Treatment

HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	1991	27046	SOUTHERN CALIFORNIA CHEMICAL 100 NORTH FIRST. ST. GARLAND, TX 75040	Other Reuse or Recovery
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	1988	136200	WORLD RESOURCES PROCESSING CO. WALNUT LN. POTTSVILLE, PA 17901	Other Waste Treatment
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	1987	43600	CP CHEMICALS HIGHWAY 15 SOUTH INDUSTRIAL, PARK SUMTER, SC 29150	Other Waste Treatment
LEAD (TRI Chemical ID: 007439921)	1996	250	RINECO 1007 VULCAN RD-HASKELL BENTON, AR 72015	Incineration/Thermal Treatment
LEAD (TRI Chemical ID: 007439921)	1995	250	SAFETY-KLEEN CORP. 7027 COMMERCIAL DR. MORROW, GA 30260	Incineration/Thermal Treatment
LEAD (TRI Chemical ID: 007439921)	1988	250	WORLD RESOURCES PROCESSING CO. WALNUT LN. POTTSVILLE, PA 17901	Other Waste Treatment

LEAD (TRI Chemical ID: 007439921)	1987	250	CECOS INTERNATIONAL 27004 SOUTH FROST ROAD LIVINGSTON, LA 70754	Landfill/Disposal Surface Impoundment
LEAD (TRI Chemical ID: 007439921)	1987	250	WORLD RESOURCES PROCESSING CO. WALNUT LANE POTTSVILLE, PA 17901	Other Waste Treatment
LEAD COMPOUNDS (TRI Chemical ID: N420)	1998	250	RINECO 1007 VULCAN RD.-HASKELL BENTON, AR 72015	Incineration/Insignificant Fuel Value
LEAD COMPOUNDS (TRI Chemical ID: N420)	1998	1361	WORLD RESOURCES CO. RECYCLING FACILITY WALNUT LN. RD. #5 BOX 5553 POTTSVILLE, PA 17901	Metals Recovery
LEAD COMPOUNDS (TRI Chemical ID: N420)	1997	250	RINECO 1007 VULCAN RD-HASKELL BENTON, AR 72015	Incineration/Insignificant Fuel Value
LEAD COMPOUNDS (TRI Chemical ID: N420)	1997	750	WORLD RESOURCES CO., RECYCLING FACILITY WALNUT LANE, RD. #5, BOX 5553 POTTSVILLE, PA 179019507	Metals Recovery

Summary of Waste Management Activites:

Please note that chemical amounts shown here are not included in Total Aggregate Releases shown above. All transfer amounts are reported in pounds.

Year	On-Site Recycling	Off-Site Recycling	On-Site Energy Recovery	Off-Site Energy Recovery	On-Site Treatment	Off-Site Treatment	Total Amount
1997	0	499293	0	0	0	116	499409
1998	0	580948	0	0	0	94	581042
1999 (Projected)	0	601500	0	0	0	105	601605
2000 (Projected)	0	601500	0	0	0	105	601605

Chemicals Under Waste Management:

Please note that chemical amounts shown here are not included in the Total Aggregate Releases shown above. Transfers to Publicly Owned Treatment Works are listed on a seperate table. All transfer amounts are reported in pounds.

Chemical Name	Year	On-Site Recycling	Off-Site Recycling	On-Site Energy Recovery	Off-Site Energy Recovery	On-Site Treated	Off-Site Treated	Total Amount
COPPER COMPOUNDS	1997	0	498366	0	0	0	81	498447
	1998	0	579542	0	0	0	94	579636
	1999 (Projected)	0	600000	0	0	0	100	600100
	2000 (Projected)	0	600000	0	0	0	100	600100

LEAD COMPOUNDS	1997	0	927	0	0	0	35	962
	1998	0	1406	0	0	0	0	1406
	1999 (Projected)	0	1500	0	0	0	5	1505
	2000 (Projected)	0	1500	0	0	0	5	1505

Transfer of Chemicals to Publicly Owned Treatment Works (POTW):

Please note that transfer amounts are not included in the Total Aggregate Releases shown above. All transfer amounts are reported in pounds. For all releases estimated as a range, the mid-point of the range was used in these calculations.

Chemical Name	Year	Total Transfer Amount (Pounds)
CHLORINE	1987	250
CHLORINE	1988	250
CHLORINE	1991	5
CHLORINE	1992	5
CHLORINE	1993	5
CHLORINE	1994	5
CHLORINE	1995	5
CHLORINE	1996	5
COPPER	1987	250
COPPER	1988	250
COPPER COMPOUNDS	1989	110
COPPER COMPOUNDS	1990	155

COPPER COMPOUNDS	1991	184
COPPER COMPOUNDS	1992	283
COPPER COMPOUNDS	1993	341
COPPER COMPOUNDS	1994	250
COPPER COMPOUNDS	1995	250
COPPER COMPOUNDS	1996	250
COPPER COMPOUNDS	1997	250
COPPER COMPOUNDS	1998	94
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY)	1987	116100
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY)	1988	190400
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY)	1990	5
LEAD	1987	250
LEAD	1988	250
LEAD	1995	5
LEAD	1996	5
LEAD COMPOUNDS	1997	5
LEAD COMPOUNDS	1998	5
NITRIC ACID	1987	241680
NITRIC ACID	1988	354000
NITRIC ACID	1990	5
SODIUM HYDROXIDE (SOLUTION)	1987	296639
SODIUM HYDROXIDE (SOLUTION)	1988	628860
SODIUM SULFATE (SOLUTION)	1987	161733
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY)	1987	111658

SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY)	1988	176637
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY)	1990	5
TOLUENE	1991	15
TOLUENE	1993	5
TOLUENE	1994	5
TOLUENE	1995	250
TOLUENE	1996	250
TOLUENE	1998	5

Publicly Owned Treatment Works (POTW) that Chemicals were Transferred to:

Chemical Name	Year	POTW Name and Address
1,1,1-TRICHLOROETHANE	1989	GEORGIA UTILITIES P.O. BOX 2007 PEACHTREE CITY, GA 30269
CHLORINE	1987	GEORGIA UTILITIES COMPANY P. O. BOX 2007 PEACHTREE, GA 30269
CHLORINE	1988	GEORGIA UTILITIES CO. P.O. BOX 2007 PEACHTREE CITY, GA 30269

CHLORINE	1989	GEORGIA UTILITIES P.O. BOX 2007 PEACHTREE CITY, GA 30269
CHLORINE	1990	GEORGIA UTILITIES P.O. BOX 2007 PEACHTREE CITY, GA 30269
CHLORINE	1991	GEORGIA UTILITIES FLAT CREEK W, ATER POLLUTION CONTROL PLANT HWY. 74 SOUTH PEACHTREE CITY, GA 30269
CHLORINE	1992	GEORGIA UTILITIES FLAT CREEK, WATER POLLUTION CONTROL PLANT 313 HWY. 74 SOUTH PEACHTREE CITY, GA 30269
CHLORINE	1993	GEORGIA UTILITIES FLAT CREEK, WATER POLLUTION CONTROL PLANT 313 HWY 74 S. PEACHTREE CITY, GA 302691984
CHLORINE	1994	GEORGIA UTILITIES FLAT CREEK 313 HWY. 74 SOUTH PEACHTREE CITY, GA 30269

CHLORINE	1995	GEORGIA UTILITIES FLAT CREEK 313 HWY. 74 SOUTH PEACHTREE CITY, GA 30269
CHLORINE	1996	PTC WATER & SEWERAGE AUTHORITY 313 HWY. 74 SOUTH PEACHTREE CITY, GA 30269
CHLORINE	1997	PTC WATER & SEWERAGE AUTHORITY 313 HWY. 74 SOUTH PEACHTREE CITY, GA 30269
CHLORINE	1998	PTC WATER & SEWERAGE AUTHORITY 313 HWY. 74 S PEACHTREE CITY, GA 30269
COPPER	1987	GEORGIA UTILITIES COMPANY P.O. BOX 2007 PEACHTREE CITY, GA 30269
COPPER	1988	GEORGIA UTILITIES CO. P.O. BOX 2007 PEACHTREE CITY, GA 30269
COPPER	1989	GEORGIA UTILITIES P.O. BOX 2007 PEACHTREE CITY, GA 30269

COPPER COMPOUNDS	1989	GEORGIA UTILITIES P.O. BOX 2007 PEACHTREE CITY, GA 30269
COPPER COMPOUNDS	1990	GEORGIA UTILITIES P.O. BOX 2007 PEACHTREE CITY, GA 30269
COPPER COMPOUNDS	1991	GEORGIA UTILITIES FLAT CREEK W, ATER POLLUTION CONTROL PLANT HWY. 74 SOUTH PEACHTREE CITY, GA 30269
COPPER COMPOUNDS	1992	GEORGIA UTILITIES FLAT CREEK, WATER POLLUTION CONTROL PLANT 313 HWY 74 SOUTH PEACHTREE CITY, GA 30269
COPPER COMPOUNDS	1993	GEORGIA UTILITIES FLAT CREEK, WATER POLLUTION CONTROL PLANT 313 HWY. 74 S. PEACHTREE CITY, GA 302691984
COPPER COMPOUNDS	1994	GEORGIA UTILITIES FLAT CREEK 313 HWY. 74 SOUTH PEACHTREE CITY, GA 30269

COPPER COMPOUNDS	1995	GEORGIA UTILITIES FLAT CREEK 313 HWY. 74 SOUTH PEACHTREE CITY, GA 30269
COPPER COMPOUNDS	1996	PTC WATER & SEWERAGE AUTHORITY 313 HWY. 74 SOUTH PEACHTREE CITY, GA 30269
COPPER COMPOUNDS	1997	PTC WATER & SEWERAGE AUTHORITY 313 HWY. 74 SOUTH PEACHTREE CITY, GA 30269
COPPER COMPOUNDS	1998	PTC WATER & SEWERAGE AUTHORITY 313 HWY. 74 S. PEACHTREE CITY, GA 30269
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY)	1987	GEORGIA UTILITIES COMPANY P.O. BOX 2007 PEACHTREE CITY, GA 30269
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY)	1988	GEORGIA UTILITIES CO. P.O. BOX 2007 PEACHTREE CITY, GA 30269
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY)	1989	GEORGIA UTILITIES P.O. BOX 2007 PEACHTREE CITY, GA 30269

HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY)	1990	GEORGIA UTILITIES P.O. BOX 2007 PEACHTREE CITY, GA 30269
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY)	1991	GEORGIA UTILITIES FLAT CREEK W, ATER POLLUTION CONTROL PLANT HWY. 74 SOUTH PEACHTREE CITY, GA 30269
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY)	1992	GEORGIA UTILITIES FLAT CREEK, WATER POLLUTION CONTROL PLANT 313 HWY 74 SOUTH PEACHTREE CITY, GA 30269
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY)	1993	GEORGIA UTILITIES FLAT CREEK, WATER POLLUTION CONTROL PLANT 313 HWY 74 S. PEACHTREE CITY, GA 30269
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY)	1994	GEORGIA UTILITIES FLAT CREEK 313 HWY. 74 SOUTH PEACHTREE CITY, GA 30269
LEAD	1987	GEORGIA UTILITIES COMPANY P.O. BOX 2007 PEACHTREE CITY, GA 30269

LEAD	1988	GEORGIA UTILITIES CO. P.O. BOX 2007 PEACHTREE CITY, GA 30269
LEAD	1995	GEORGIA UTILITIES 313 HWY. 74 SOUTH PEACHTREE CITY, GA 30269
LEAD	1996	PTC WATER & SEWERAGE AUTHORITY 313 HWY. 74 SOUTH PEACHTREE CITY, GA 30269
LEAD COMPOUNDS	1997	PTC WATER & SEWERAGE AUTHORITY 313 HWY. 74 SOUTH PEACHTREE CITY, GA 30269
LEAD COMPOUNDS	1998	PTC WATER & SEWERAGE AUTHORITY 313 HWY. 74 S PEACHTREE CITY, GA 30269
NITRIC ACID	1987	GEORGIA UTILITIES COMPANY P. O. BOX 2007 PEACHTREE CITY, GA 30269
NITRIC ACID	1988	GEORGIA UTILITIES CO. P.O. BOX 2007 PEACHTREE CITY, GA 30269

NITRIC ACID	1989	GEORGIA UTILITIES P.O. BOX 2007 PEACHTREE CITY, GA 30269
NITRIC ACID	1990	GEORGIA UTILITIES P.O. BOX 2007 PEACHTREE CITY, GA 30269
NITRIC ACID	1991	GEORGIA UTILITIES FLAT CREEK W, ATER POLLUTION CONTROL PLANT HWY. 74 SOUTH PEACHTREE CITY, GA 30269
NITRIC ACID	1992	GEORGIA UTILITIES FLAT CREEK, WATER POLLUTION CONTROL PLANT HWY 74 SOUTH PEACHTREE CITY, GA 30269
NITRIC ACID	1993	GEORGIA UTILITIES FLAT CREEK, WATER POLLUTION CONTROL PLANT 313 HWY 74 S. PEACHTREE CITY, GA 30269
SODIUM HYDROXIDE (SOLUTION)	1987	GEORGIA UTILITIES COMPANY P. O. BOX 2007 PEACHTREE CITY, GA 30269

SODIUM HYDROXIDE (SOLUTION)	1988	GEORGIA UTILITIES CO. P.O. BOX 2007 PEACHTREE CITY, GA 30269
SODIUM SULFATE (SOLUTION)	1987	GEORGIA UTILITIES COMPANY P.O. BOX 2007 PEACHTREE CITY, GA 30269
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY)	1987	GEORGIA UTILITIES COMPANY P. O. BOX 2007 PEACHTREE CITY, GA 30269
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY)	1988	GEORGIA UTILITIES CO. P.O. BOX 2007 PEACHTREE CITY, GA 30269
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY)	1989	GEORGIA UTILITIES P.O. BOX 2007 PEACHTREE CITY, GA 30269
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY)	1990	GEORGIA UTILITIES P.O. BOX 2007 PEACHTREE CITY, GA 30269
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY)	1991	GEORGIA UTILITIES FLAT CREEK W, ATER POLLUTION CONTROL PLANT HWY. 74 SOUTH PEACHTREE CITY, GA 30269

SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY)	1992	GEORGIA UTILITIES FLAT CREEK, WATER POLLUTION CONTROL PLANT 313 HWY 74 SOUTH PEACHTREE CITY, GA 30269
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY)	1993	GEORGIA UTILITIES FLAT CREEK, WATER POLLUTION CONTROL PLANT 313 HWY 74 S. PEACHTREE CITY, GA 30269
TOLUENE	1991	GEORGIA UTILITIES FLAT CREEK W, ATER POLLUTION CONTROL PLANT HWY. 74 SOUTH PEACHTREE CITY, GA 30269
TOLUENE	1993	GEORGIA UTILITIES FLAT CREEK, WATER POLLUTION CONTROL PLANT 313 HWY 74 S. PEACHTREE CITY, GA 30269
TOLUENE	1994	GEORGIA UTILITIES FLAT CREEK 313 HWY. 74 SOUTH PEACHTREE CITY, GA 30269
TOLUENE	1995	GEORGIA UTILITIES FLAT CREEK 313 HWY. 74 SOUTH PEACHTREE CITY, GA 30269

TOLUENE	1996	PEACHTREE CITY WATER & SEWERAG 313 HWY. 74 SOUTH PEACHTREE CITY, GA 30269
TOLUENE	1997	PTC WATER & SEWERAGE AUTHORITY 313 HWY. 74 SOUTH PEACHTREE CITY, GA 30269
TOLUENE	1998	PTC WATER & SEWERAGE AUTHORITY 313 HWY. 74 S PEACHTREE CITY, GA 30269

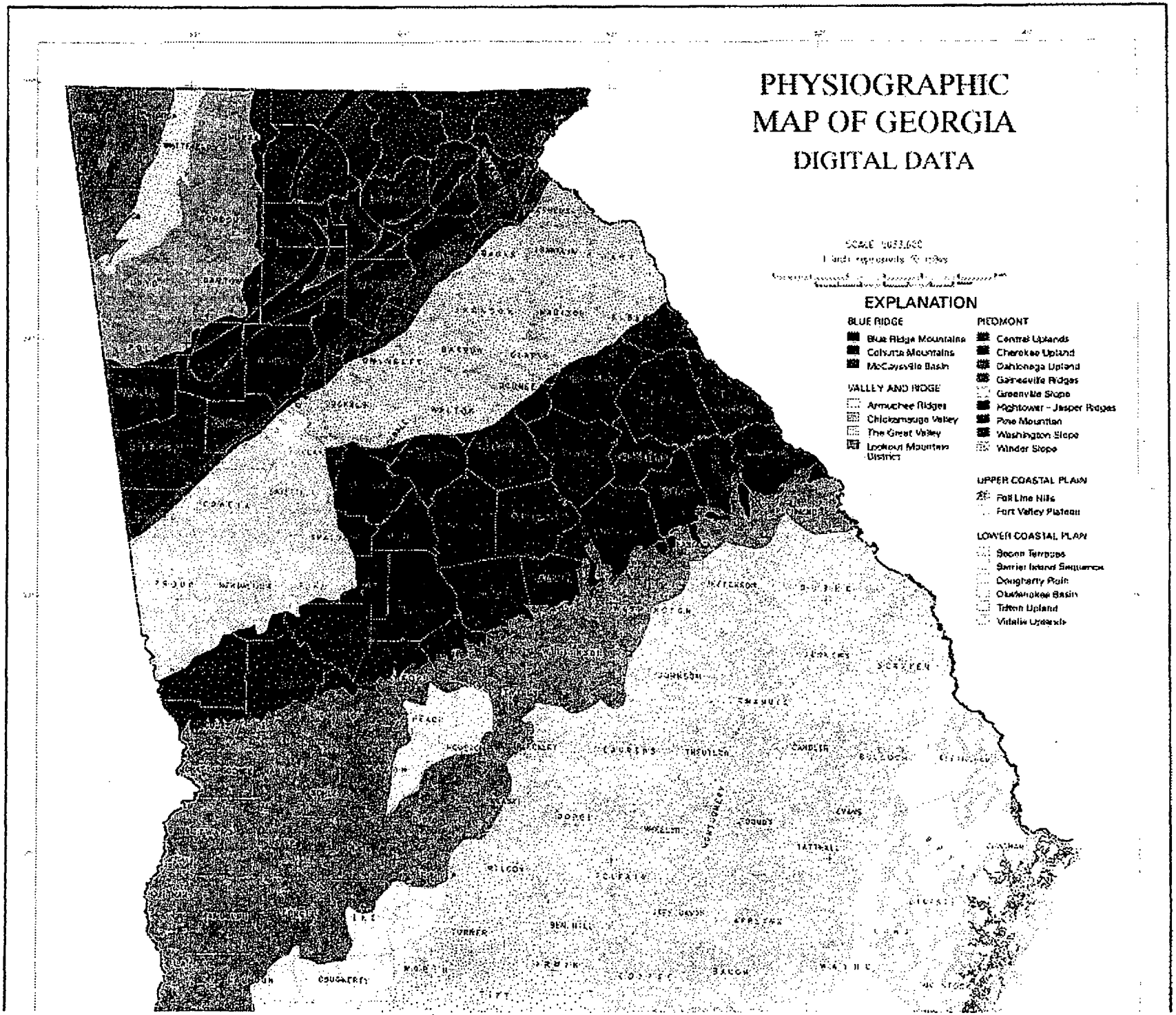
Non Production Releases:

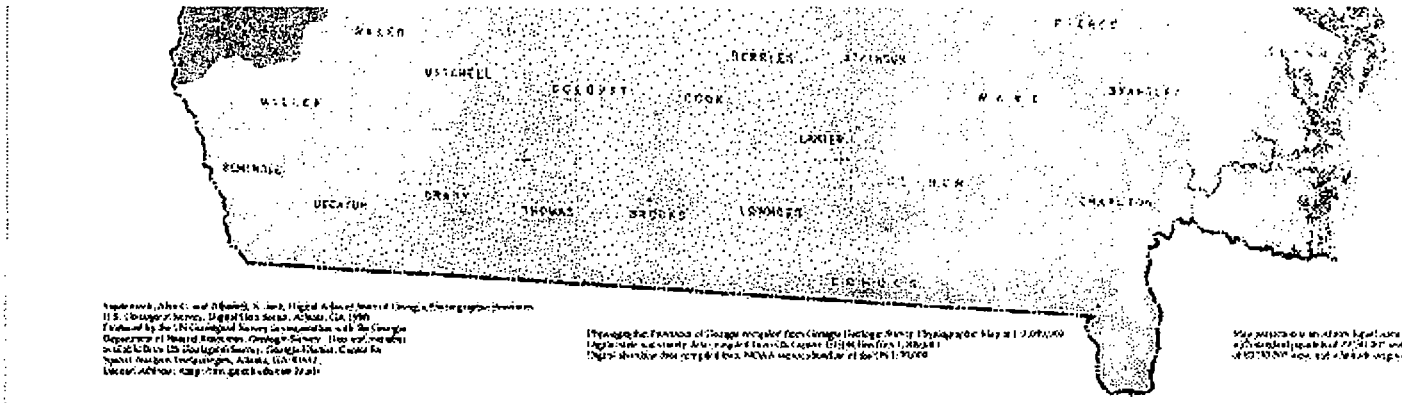
This report shows the quantities of the chemicals released to the environment by reporting year as a result of remedial actions, catastrophic events, or other one-time events not associated with production processes. Chemicals with zero release amounts are not shown.

Chemical Name	Reporting Year	Release Quantity
CHLORINE	1996	2

All chemicals reported above have release or transfer amounts greater than zero. To see a list of all chemicals reported by this facility click here.

The Environmental Defense Fund's (EDF) Chemical Scorecard has on-line environmental information regarding this EXIT EPA facility's reported TRI releases. This information resource is not maintained, managed, or owned by the Environmental Protection Agency (EPA) or the Envirofacts Support Team. Neither the EPA nor the Envirofacts Support Team is responsible for their content or site operation. The Envirofacts Warehouse provides this reference only as a convenience to our Internet users.


PHYSIOGRAPHIC
MAP OF GEORGIA
DIGITAL DATA
EXPLANATION
BLUE RIDGE
Blue Ridge Mountains
Coliunta Mountains
McCaysville Basin
VALLEY AND RIDGE
Armuchee Ridges
Chickamauga Valley
The Great Valley
Lookout Mountain District
PIEDMONT
Central Uplands
Cherokee Upland
Dahlonega Upland
Gainesville Ridges
Greenville Slope
Hightower - Jasper Ridges
Pine Mountain
Washington Slope
Winder Slope
UPPER COASTAL PLAIN
Fall Line Hills
Fort Valley Plateau
LOWER COASTAL PLAIN
Storm Terraces
Barrier Island Sequence
Dougherty Plain
Okefenokee Basin
Tifton Upland
Vidalia Upland


MITCHELL
COOK
BERRIEN
LANIER
DECATUR
GRADY
THOMAS
BROOKS
LOWNDES
CHARLTON

Reference 16

• The Piedmont

The Piedmont is a region of moderate-to-high-grade metamorphic rocks , such as schists, amphibolites, gneisses and migmatites, and igneous rocks like granite. Topographically, the Piedmont mostly consists of rolling hills, although faulting has produced the impressive ridge of Pine Mountain near Warm Springs. Isolated granitic plutons also rise above the Piedmont landscape to give prominent features like Stone Mountain.

One major feature cutting across the Piedmont (as defined here) is the Brevard Fault zone. The Brevard Fault Zone runs SW-NE and passes through Centralhatchee in Heard County, northwest Atlanta, Duluth, Buford, and Gainesville before leaving Georgia at the westernmost point on the Tugaloo River in northernmost Stephens County. The Chattahoochee River follows the Brevard Zone too. However, the regional extent of the Brevard Zone is reflected by the fact that it is named after the town of Brevard, NC. The Brevard Zone has been interpreted as a variety of different kinds of faults or discontinuities, and its true nature remains enigmatic.

Piedmont soils are commonly a red color for which Georgia is famous. Those soils consist of khandite-group (kaolinite, halloysite, dickite) clays and of iron oxides. They result from the intense weathering of feldspar-rich igneous and metamorphic rocks. This intense weathering dissolves or alters nearly all minerals and leaves behind a residue of aluminum-bearing clays and iron-bearing iron oxides because of the low solubilities of aluminum and iron at earth-surface conditions. Those iron oxides give the red color to the clay-rich soil, yielding the red clay that has come to be almost synonymous with central Georgia, and the abundance of clay has contributed to a tradition of folk pottery in central and north Georgia.

Mineral resources of the Piedmont include hard crushed stone, which is quarried by such companies as Vulcan Materials. Granite has long been quarried for tombstones and other monuments in the eastern Piedmont near Elberton, and it was once quarried from the Stone Mountain granite at Stone Mountain Park. Soapstone was mined by Native Americans in southwestern Dekalb County at Soapstone Ridge. One well-known kyanite mine in the Piedmont was at Grave's Mountain. Groundwater in the Piedmont largely flows along faults and fractures, making it difficult to find but often locally abundant.

The granitic rocks of the Piedmont make radon a potential concern in the region. The USGS map of geologic radon potential shows the Piedmont, as well as the Blue Ridge, as a region of "moderate" radon potential, whereas that potential is "low" in the Valley and Ridge and Coastal Plain.

Athens and Atlanta are two cities in the Georgia Piedmont. The Piedmont extends a little bit westward into Alabama before it pinches out between the Valley and Ridge and the Coastal Plain. To the northeast, it cuts a broad swath across South Carolina, North Carolina, and Virginia. Spartanburg, SC, and Greensboro and Winston-Salem, NC, are Piedmont cities to the northeast of Georgia.

Reference 17

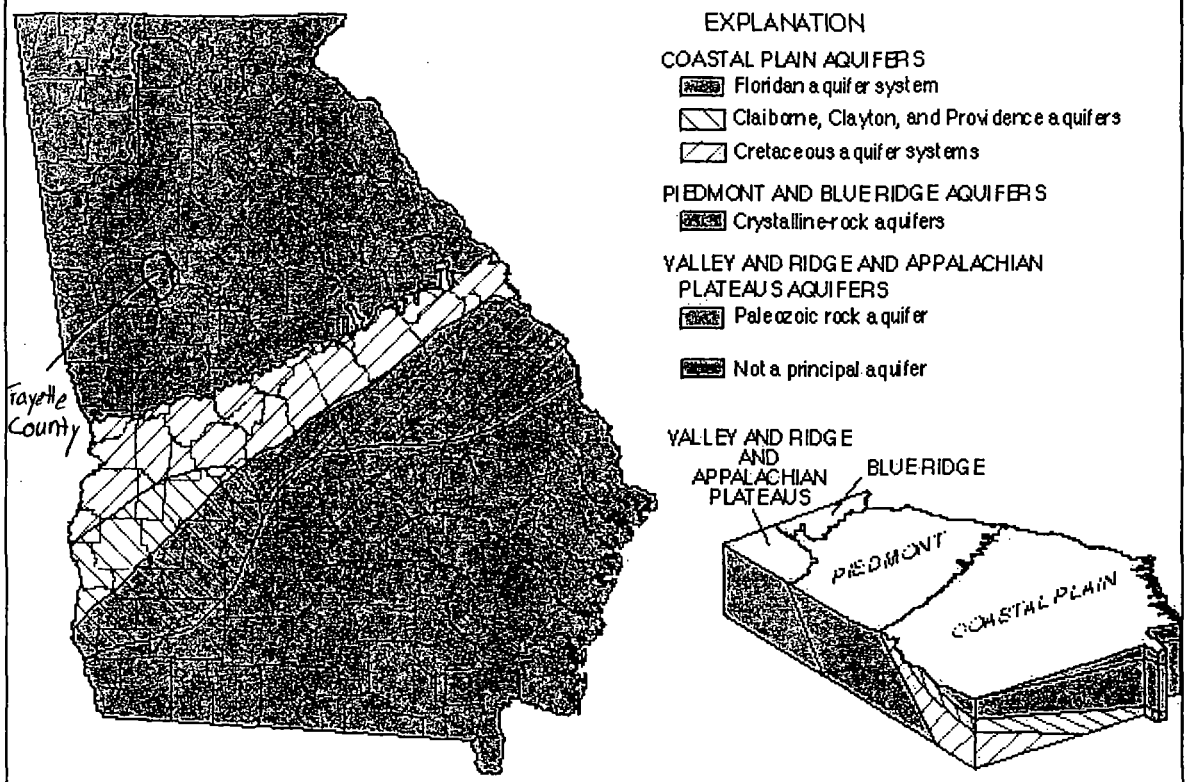


Figure 1. Area of use of principal aquifers and generalized diagram showing aquifers and physiographic provinces in Georgia.

USGS

Ground-Water Conditions in Georgia, 1999

USGS Open-File Report 00-515

GROUND-WATER RESOURCES

Contrasting geologic features and landforms of the physiographic provinces of Georgia (table 2, fig. 1) result in substantial differences in ground-water conditions from one part of the State to another. These features that make up the framework of the aquifers affect the quantity and quality of ground water throughout the State.

Surficial aquifers are present in each of the physiographic provinces. In the Piedmont, Blue Ridge, and Valley and Ridge Provinces (fig. 1), the surficial aquifers consist of soil, saprolite, stream alluvium, colluvium, and other surficial deposits. In the Coastal Plain Province, the surficial aquifers consist of intermixed layers of sand, clay, and limestone. The surficial aquifers usually are under water-table (unconfined) conditions and are used for domestic and livestock supplies. These aquifers are semiconfined locally in the coastal area.

In the Piedmont and Blue Ridge Provinces, rocks are complex and consist of structurally deformed metamorphic and igneous rocks. Ground water is transmitted through secondary openings along fractures, foliation, joints, contacts, or other features in the crystalline bedrock. In the Valley and Ridge Province, ground water is transmitted through both primary and secondary openings in folded and faulted sedimentary and metasedimentary rocks of Paleozoic age.

The most productive aquifers in Georgia are in the Coastal Plain Province in the southern part of the State. The Coastal Plain is underlain by alternating layers of sand, clay, dolomite, and limestone that dip and thicken to the southeast. Coastal Plain aquifers generally are confined except near their northern limits, where they crop out or are near land surface. Aquifers in the Coastal Plain include the upper and lower Brunswick aquifers, the Floridan aquifer system, the Claiborne aquifer, the Gordon aquifer, the Clayton aquifer, and the Cretaceous aquifers and aquifer systems.

Reference 18

Table 2. Aquifer and well characteristics in Georgia
[modified from Clarke and Pierce (1984) and Peck and others (1992); ft, feet; gal/min, gallons per minute]

	Well characteristics			
	Depth (ft)	Yield (gal/min)		
Aquifer name and description	Common range	Common range	May exceed	**Remarks**
Surficial aquifer: Unconsolidated sediments; residuum, generally unconfined	11-72	2-25	25	Primary source of water for domestic and livestock supply in rural areas. Supplemental source of water in coastal Georgia.
Upper and lower Brunswick aquifers: Phosphatic and dolomitic quartz sand, generally confined	85-390	10-30	180	Not a major source of water in coastal Georgia, but considered a supplemental water supply to the Upper Floridan aquifer. Most wells are multi-aquifer, tapping the upper and lower Brunswick aquifers and the Upper Floridan aquifer. The lower Brunswick aquifer currently is not monitored (Clarke and others, 1990, p. 26-28).
Floridan aquifer system: Limestone, dolomite, and calcareous sand, generally confined	40-900	1,000-5,000	11,000	Supplies 50 percent of ground water in Georgia. The aquifer system is divided into the Upper and Lower Floridan aquifers. In the Brunswick area, the Upper Floridan aquifer includes two freshwater-bearing zones, the upper water-bearing zone and the lower water-bearing zone. The

				Lower Floridan aquifer is not considered a major aquifer. In the Brunswick area and in southeastern Georgia, the Lower Floridan aquifer includes the brackish-water zone, the deep freshwater zone, and the Fernandina permeable zone (Krause and Randolph, 1989). The Lower Floridan aquifer extends to more than 2,700 ft and yields high-chloride water below 2,300 ft (Jones and Maslia, 1994).
Gordon aquifer system: Sand and sandy limestone, generally confined	270-530	87-1,200	1,800	Major source of water for irrigation, industrial, and public-supply use in east-central Georgia.
Claiborne aquifer: Sand and sandy limestone, generally confined	20-450	150-600	1,500	Major source of water for irrigation, industrial, and public-supply use in southwestern Georgia.
Clayton aquifer: Limestone and sand, generally confined	40-800	250-600	2,150	Major source of water for irrigation, industrial, and public-supply use in southwestern Georgia.
Cretaceous aquifers and aquifer systems: Sand and gravel, generally confined	30-750	50-1,200	3,300	Major source of water in east-central Georgia. Supplies water for kaolin mining and processing. Includes the Providence aquifer in southwestern Georgia, and the Dublin, Midville, and Dublin-

				Midville aquifer systems in east-central Georgia.
Paleozoic-rock aquifers: Sandstone, limestone, and dolostone	15-2,100	1-50	3,500	Not laterally extensive. Limestone and dolostone aquifers are most productive. Storage is in regolith, primary openings, and secondary fractures and solution openings in rock. Springs in limestone and dolostone aquifers discharge at rates of as much as 5,000 gal/min. Sinkholes may form in areas of intensive pumping.
Crystalline-rock aquifers: Granite, gneiss, schist, and quartzite	40-600	1-25	500	Not laterally extensive. Storage is in regolith and fractures in rock. Hydrogeology of crystalline-rock aquifers is not well understood.

GROUND-WATER LEVELS

Short-term fluctuations and long-term trends in ground-water levels result from variations in recharge and discharge. Recharge varies in response to precipitation and surface-water infiltration into an aquifer. Discharge occurs as natural flow from an aquifer to streams and springs, as evapotranspiration, and as withdrawal from wells.

Discussions of ground-water levels in Georgia are grouped by aquifer and subdivided into areas and subareas in which wells have similar water-level fluctuations and trends.

Water-level fluctuations in 1999 are shown for 130 continuously monitored wells, which are considered to be representative of ground-water levels throughout the State. For each well, well-site information is listed, record high and low water levels for the period of record, monthly mean water levels are shown in hydrographs for the period of record, daily mean water levels are shown in hydrographs for 1999, and monthly and annual water-level statistics (minimum, mean, and maximum daily mean water levels) are tabulated for 1999. Monthly statistics are not computed for months having less than 25 days of record. Extreme water levels for the period of record listed in the well-site information and tabulated water-level statistics are reported to the nearest 0.01 ft, reflecting the accuracy of the recorders used. Land-surface data generally are determined from the best available topographic map, and are accurate to about one-half the contour interval. Some land-surface data were determined by surveying methods or Global Positioning System (GPS) and are more accurate. In this report,

an extreme water level refers to the lowest or highest daily mean water level for the period of record of a particular well. Thus, any instantaneous water-level measurement on a given day may be lower or higher than the extreme water level reported in the text, the daily mean water level shown on the hydrograph, or the minimum or maximum values tabulated.

Web version note: you may continue reading the text of this report by clicking on 'Next' below, or you may go directly to one of the lists to access the PDF file for one or more wells.

To download and view PDF files, you'll need the free Adobe Acrobat Reader software.

Observation wells for which hydrographs are included in this report:

- Listed by county (Table 3a)
- Listed by aquifer (Table 3b)
- Listed by well identification number (Table 4)

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(ST-98-46) Estimates of Housing Units, Households, Households by Age of Householder, and Persons per Household: July 1, 1998

The documentation is located at the end of the data file.

Source: Population Estimates Program, Population Division, U.S. Census Bureau, Washington, DC 20233
Contact: Statistical Information Staff, Population Division, U.S. Census Bureau (301)457-2422

Internet release date: December 8, 1999

(in thousands)

Area	Total Housing Units	Total Households	Households by Age of Householder: 15 to 24 Years	25 to 34 Years	35 to 44 Years	45 to 54 Years	55 to 64 Years	65 Years and Over	Persons Per Household
United States	112,499	101,041	5,247	17,727	23,658	19,605	13,106	21,699	2.61
Northeast	21,753	19,450	693	3,257	4,538	3,833	2,574	4,555	2.58
New England	5,832	5,135	193	917	1,228	1,008	631	1,159	2.53
Middle Atlantic	15,921	14,315	500	2,340	3,310	2,825	1,943	3,397	2.60
Midwest	26,487	23,761	1,263	4,119	5,541	4,538	3,082	5,218	2.58
East North Central	18,408	16,620	834	2,905	3,896	3,213	2,175	3,598	2.60
West North Central	8,078	7,141	428	1,215	1,646	1,325	907	1,620	2.54
South	40,674	35,985	2,006	6,361	8,242	6,891	4,784	7,700	2.59
South Atlantic	21,555	18,757	933	3,302	4,275	3,572	2,460	4,215	2.54
East South Central	6,955	6,257	345	1,086	1,386	1,203	877	1,360	2.57
West South Central	12,165	10,971	728	1,973	2,581	2,117	1,447	2,125	2.67
West	23,584	21,845	1,285	3,990	5,337	4,343	2,665	4,225	2.70
Mountain	7,071	6,287	440	1,086	1,482	1,249	817	1,214	2.62
Pacific	16,513	15,558	845	2,904	3,855	3,094	1,848	3,011	2.73
Alabama	1,866	1,663	94	286	363	314	233	374	2.56
Alaska	248	215	18	35	61	52	27	21	2.78
Arizona	2,006	1,762	118	310	398	326	223	386	2.60
Arkansas	1,092	970	59	158	200	177	139	236	2.56
California	12,037	11,446	590	2,218	2,859	2,229	1,339	2,212	2.79
Colorado	1,722	1,561	100	267	396	340	201	257	2.49
Connecticut	1,379	1,238	42	209	297	245	159	286	2.57
Delaware	326	284	13	54	68	53	36	60	2.54
District of Columbia	265	225	8	46	49	43	30	48	2.15
Florida	7,007	5,881	281	890	1,230	1,021	772	1,687	2.48
Georgia	3,184	2,843	165	572	700	568	357	481	2.63
Hawaii	440	401	17	56	97	87	53	91	2.87
Idaho	503	448	37	73	101	88	60	89	2.69
Illinois	4,777	4,438	206	790	1,053	858	583	947	2.65
Indiana	2,503	2,231	120	399	514	429	295	474	2.57
Iowa	1,208	1,103	66	180	238	202	145	273	2.50

Reference 19

Kansas	1,130	999	67	170	230	185	121	226	2.55
Kentucky	1,664	1,497	83	255	332	290	212	325	2.56
Louisiana	1,806	1,599	97	271	367	313	224	328	2.66
Maine	626	490	24	80	117	98	61	110	2.48
Maryland	2,091	1,906	73	350	487	391	242	364	2.63
Massachusetts	2,568	2,349	83	434	552	458	287	536	2.52
Michigan	4,168	3,693	182	644	879	729	476	784	2.60
Minnesota	2,021	1,791	101	318	442	342	219	369	2.58
Mississippi	1,106	997	56	175	219	185	139	224	2.68
Missouri	2,394	2,089	113	357	476	386	278	479	2.53
Montana	383	346	24	47	78	73	50	75	2.47
Nebraska	711	636	43	107	143	117	79	146	2.54
Nevada	767	676	40	122	160	134	95	125	2.54
New Hampshire	539	450	19	86	119	89	51	87	2.56
New Jersey	3,237	2,957	84	471	720	601	404	677	2.69
New Mexico	747	632	40	101	152	127	85	128	2.70
New York	7,455	6,766	245	1,156	1,569	1,350	930	1,515	2.61
North Carolina	3,367	2,883	153	537	650	549	386	607	2.54
North Dakota	293	247	18	41	55	44	31	59	2.48
Ohio	4,682	4,285	220	735	982	821	570	958	2.55
Oklahoma	1,459	1,288	89	208	276	240	182	292	2.52
Oregon	1,401	1,286	79	203	293	271	165	275	2.50
Pennsylvania	5,229	4,593	171	713	1,020	873	610	1,204	2.54
Rhode Island	431	376	14	67	87	69	44	95	2.53
South Carolina	1,683	1,441	74	256	324	285	198	303	2.58
South Dakota	322	277	20	44	62	49	34	68	2.55
Tennessee	2,318	2,100	112	370	472	414	293	438	2.52
Texas	7,808	7,113	483	1,336	1,737	1,386	903	1,268	2.71
Utah	731	677	67	140	154	121	78	118	3.06
Vermont	289	231	11	41	57	49	28	46	2.46
Virginia	2,837	2,579	129	494	624	518	332	480	2.55
Washington	2,386	2,211	141	393	545	455	265	413	2.52
West Virginia	794	716	36	102	143	143	107	185	2.48
Wisconsin	2,279	1,973	107	337	468	376	250	435	2.58
Wyoming	213	185	15	26	43	39	25	36	2.54

Documentation notes for the October 1999 release of July 1, 1998 household and housing unit estimates.

Age - The age of individuals is age at their last birthday.

Census Regions and Divisions - The Census Bureau delineates two

sets of sub-national regions that are formed of states. This two-tiered system of regions consists of 9 census divisions nested within 4 census regions. The Northeast region includes the New England division: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont; and the Middle Atlantic division: New Jersey, New York, and Pennsylvania. The Midwest region includes the East North Central division: Illinois, Indiana, Michigan, Ohio, and Wisconsin; and the West North Central division: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota. The South region includes the South Atlantic division: Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia; the East South Central division: Alabama, Kentucky, Mississippi, and Tennessee; and the West South Central division: Arkansas, Louisiana, Oklahoma, and Texas. The West region includes the Mountain division: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming; and the Pacific division: Alaska, California, Hawaii, Oregon, and Washington.

Household - A household includes all people who occupy a housing unit. A household consists of a single family, one person living alone, two or more families living together, or any other group of related or unrelated people who share living arrangements.

Householder - One person in each household is designated as the householder. In most cases, this is the person, or one of the people, in whose name the home is owned, being bought, or rented. If there is no such person in the household, any adult household member 15 years old and over could be designated as the householder.

Housing Unit (Census) - A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or if vacant, intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live and eat separately from any other people in the building and which have direct access from the outside of the building or through a common hall. The April 1, 1990 census count of housing units is the number of housing units in an area as reported in the 1990 Census of Housing, or as subsequently revised. Revisions to an area's 1990 census count of housing units may occur as the result of (1) post-1990 census corrections of political boundaries, geographic misallocations, or documented underenumerations or overenumerations, and (2) geographic boundary updates made subsequent to the 1990 census, which include annexations, new incorporations, mergers, etc. The

closing date for these two forms of revisions applied to this set of estimates was December, 1996.

Housing Unit (Estimate) - Estimates of the number of housing units are calculated by updating the number of housing units from the 1990 census with data on subsequent gains and losses to the housing inventory. The main data sources for estimating these gains and losses are construction and demolition permits. For areas where permit data are not available, alternative methods are used to estimate the construction and demolition of units. Additional information on the methodology used to produce these housing unit estimates is contained at our Internet site with a URL of <http://www.census.gov/population/www/methodep.html>.

Persons per Household - The number of persons per household is obtained by dividing the number of persons in households by the number of households (or householders).

Population (Census) - The April 1, 1990 census population is a count of the number of people residing in an area (resident population) as reported in the 1990 Census of Population, or as subsequently revised. Revisions to an area's 1990 census population count may occur as the result of (1) post-1990 census corrections of political boundaries, geographic misallocations, or documented underenumerations or overenumerations, and (2) geographic boundary updates made subsequent to the 1990 census, which include annexations, new incorporations, mergers, etc. The closing date for these two forms of revisions applied to this set of estimates was December, 1996.

Population (Estimate) - The estimated population is the computed number of people living in an area (resident population) as of July 1. The estimated population is calculated from a demographic components of change model that incorporates information on natural change (births and deaths) and net migration (net domestic migration and net movement from abroad) that has occurred in the area since the reference date, such as April 1, 1990, the date of the 1990 census. Additional information on the methodology used to produce these population estimates is contained in Current Population Reports P25-1127 and at our Internet site with a URL of <http://www.census.gov/population/www/methodep.html>.

Reference 20

EPA United States Environmental Protection Agency

Envirofacts Warehouse | Safe Drinking Water Information | Report Error

Overview | Law | Query | Model | Feedback | EF Home

Safe Drinking Water Violation Report

FAYETTE COUNTY

FAYETTEVILLE, GA 30214
770-461-6041

Primary Water Source Type	Population Served
Surface water	51457

This report was created on FEB-20-2001
Results are based on data extracted on JAN-29-2001
The annual water quality report is unavailable on the Internet

NOTICE: EPA is aware of inaccuracies in the Safe Drinking Water Information System. We are working with the states to improve the quality of the data.

The tables below list all violations that the state reported to EPA for this water system. Health-based violations are listed first, followed by monitoring, reporting, and other violations.

Health Based Violations: amount of contaminant exceeded safety standard (MCL) or water was not treated properly.
No health-based violations found. EPA has no record of any health-based violations reported by the state for this water system since 1993.

Monitoring and Reporting and Other Violations: system failed to complete all samples or sample in a timely manner, or had another non-health-based violation. A significant monitoring violation means the system failed to take a large percentage of the required samples. Non-significant monitoring violations indicate that the water system failed to take some of the required samples, but did do some of the required sampling.

No monitoring or other violations found. EPA has no record of monitoring or other violations reported by the state for this water system since 1993.

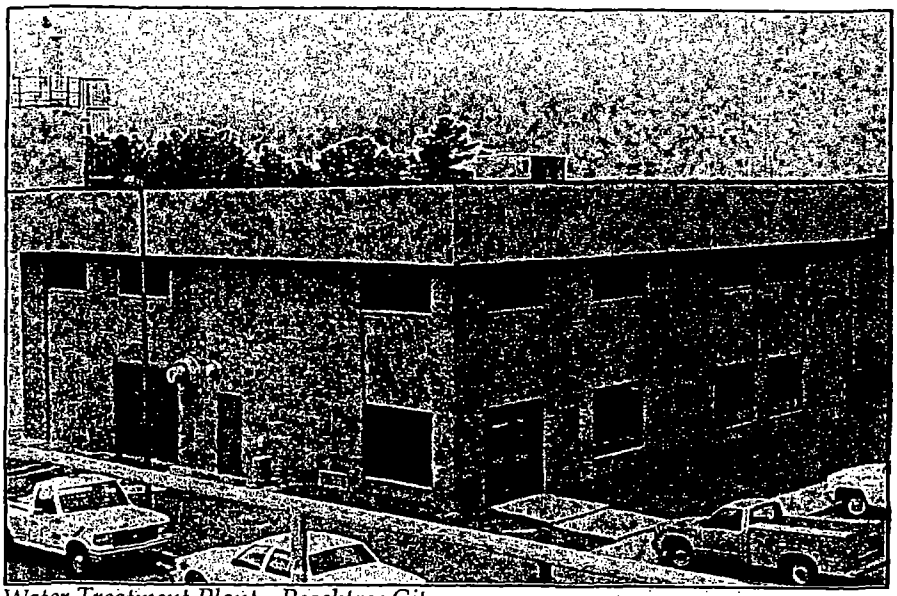
For more information on:

Violations prior to 1993: ask the operators of your water system, contact your state or file a Freedom of Information Act (FOIA) request.
Watersheds (the land areas drinking water comes from): Learn more about the health of this watershed.
Drinking water in your state: http://www.epa.gov/safewater/dwinfo/ga.htm
Drinking water in general: Visit EPA's Office of Ground Water and Drinking Water web site or call the Safe Drinking Water Hotline (1-800-426-4791). EPA has also prepared fact sheets about various regulated drinking water contaminants.

Additional Information

In 1998 (the last year for which EPA has complete data), based on information reported to EPA by the states, 0.75 percent of all systems violated a treatment technique, 5 percent of all systems violated an MCL, and 17.6 percent of all systems had a reporting/monitoring violation.

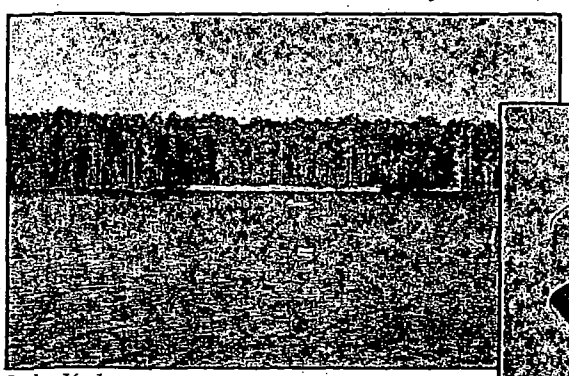
FACTS AND FIGURES



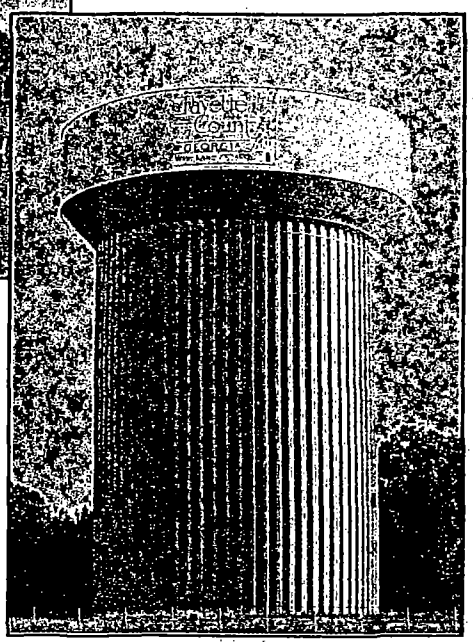
Water Treatment Plant - Peachtree City

The Fayette County Water System is a part of Fayette County government, under the direction of the Fayette County Board of Commissioners, with a Water Committee acting as an advisory committee to the Board.

The System's water treatment plant is located at 3500 TDK Boulevard in Peachtree City. This plant has the Capacity to Produce 13.5 million gallons per day.



Lake Kedron

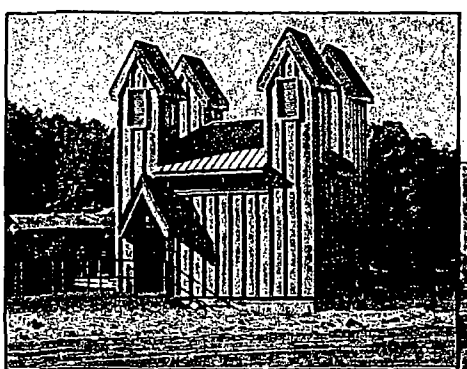


Two Million Gallon Tank

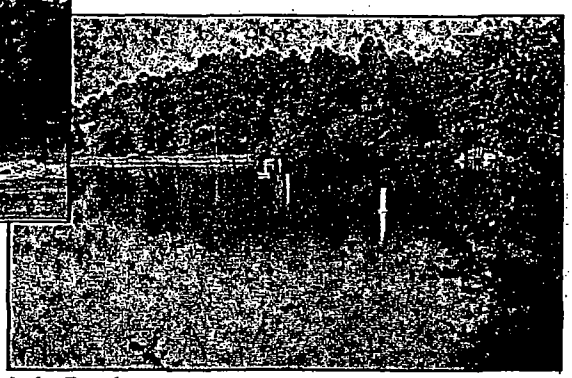
The System currently has three raw water storage reservoirs, two of which impound Flat Creek. Lake Kedron, located in northern Peachtree City, is a 235-acre reservoir which stores approximately 1.0 billion gallons of water and will safely yield 3.5 MGD during drought conditions.

Lake Peachtree, in the southern part of Peachtree City, is a 250-acre reservoir which will yield 0.5 MGD during drought conditions.

Lake Horton, in south Fayette County is 790 acres, stores 3.5 billion gallons of water and will yield 16-18 million gallons per day during drought conditions.



The Pump House - Lake Peachtree



Lake Peachtree

Due to the uniqueness of the design, the pump house on Lake Peachtree was featured in Metal Architect, (December 1990). The building is not only functional but blends with the surroundings.

ADMINISTRATION

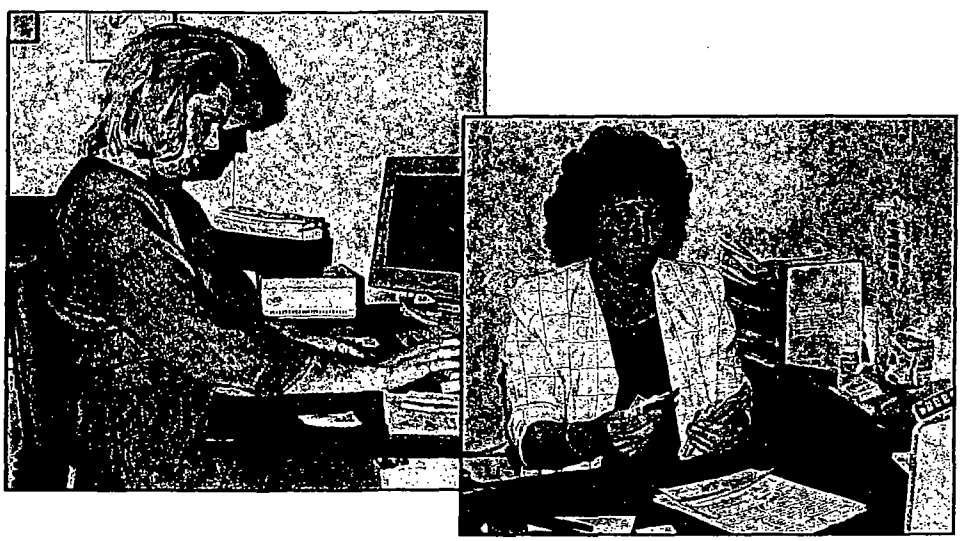
Customer Service representatives are the link between the Fayette County Water System and the customer. They adjust bills, answer questions, and try to help with any problem that arises with the customer's water service. They must have an overall grasp of the entire operation in order to find the right avenue to a solution for a customer's problem.

Meter Readers are probably the most visible group within the System. Every meter is read each month and the consumer's bill is based on their readings.

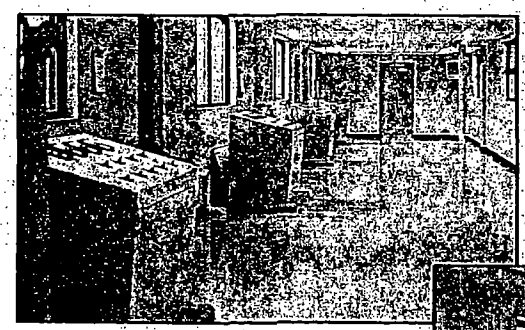
This group will soon begin using a new radio reading system to gather readings from the meters.

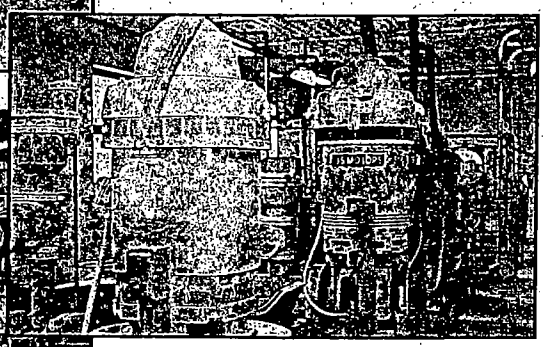
Data Processing works closely with the meter readers, loading and unloading the handheld units, and processing the water bills. This section also is responsible for putting new customers on the system and removing those who move off. The group also processes the bills for mailing.

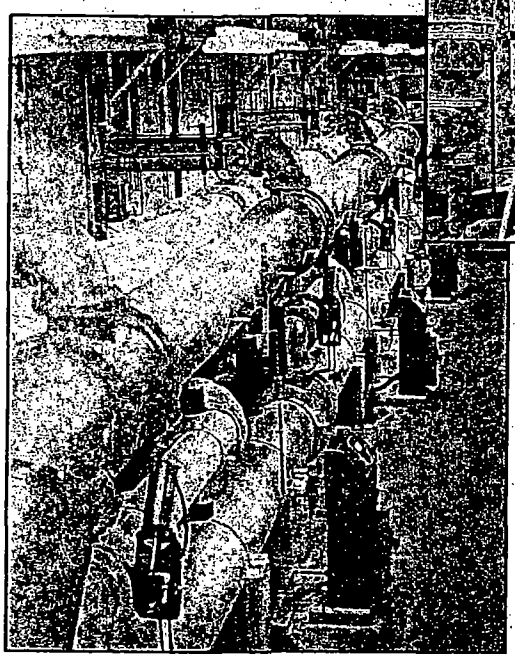
The Accounting section is involved in processing payments received, daily banking of the receipts, and handles all accounting functions for the Water System including a magnitude of construction projects. The Water System has been awarded the Certificate of Excellence for Financial Reporting for the past eleven years.



PRODUCTION AND TREATMENT







State certified operators perform a variety of laboratory tests on source samples, and finished water samples to monitor the overall quality and to evaluate the treatment process performance.

A variety of chemical and biological tests are performed daily to insure compliance with State and Federal Requirements for safe drinking water.

Filters are individually controlled to permit periodic cleaning.

A variety of pumps are used to distribute the finished product to different areas of the County.

As water goes through the treatment process, it is constantly being monitored by sensitive laboratory equipment that can measure substances in parts per million, parts per billion and even parts per trillion. Just imagine if you have one million blue blocks, each an inch cube about the size of an ice cube. That would fill a room 8 feet high, 8 feet wide, and 9 feet 5 inches long, about the size of a small bedroom. If you replace one blue block with one red block that would be one part per million. To have one part per billion, you would need one thousand rooms! To have one part per trillion, you would need one million rooms! A big city full of blue blocks and just one red one! Water utilities are careful to remove even a tiny part if it is believed to be unsafe for humans. *

*AWWA "The Story of Drinking Water"

FAYETTE COUNTY WATER SYSTEM

Storage. The System currently has 10.0 million gallons of potable water storage consisting of the following:

1. A 2,000,000 gallon inground clearwell at the Crosstown Plant.
2. A 4,000,000 gallon above ground clearwell at the Crosstown Plant.
3. Two elevated tanks in Peachtree City totaling 1,250,000 gallons.
4. A 500,000 gallon elevated tank adjacent to State Highway 92 in the north central portion of the County.
5. A 2,000,000 gallon elevated tank located north of Lake Kedron on Highway 74 at Crabapple Lane.

System Improvements.

- 1986 - Lake Kedron complete and the 4 MGD Crosstown Water Treatment Plant complete, a 4 MGD withdrawal permit was issued for Lake Kedron.
- 1988 - raw water intake installed on Line Creek and a two million gallons a day withdrawal approved.
- 1989 - Crosstown Water Plant upgraded to a 6 MGD (million gallon a day) plant.
- 1991 - Starr's Mill, millpond and dam purchased as a water source. A 2 MGD withdrawal permit was approved from Starr's Millpond.
- 1992 - closed Kelly Drive Water Plant and transferred Lake Peachtree .5 MGD withdrawal permit to the Crosstown Water Plant.
- 1992 - Water System issued a 404 permit for the Lake Horton Project in December, 1992.
- 1993 - Mallett and Associates begin engineering on the County Loop Line. This 32 mile, $10,000,000 project is six phases and six years to complete.
- 1994 - Constuction begun on the Lake Horton September, 1994.
- 1995 - Withdrawal permit issued for 10 MGD from the Flint River and 8 MGD from Lake Horton.
- 1996 - Lake Horton complete.
- 1994 - Crosstown Water Plant expanded from 6 MGD to 8 MGD.
- 1997 - Crosstown Water Plant expanded to 13.5 MGD.
- 1998 - Crabapple Booster pump station complete.
- 1998 - Started 404 permit process for Lake McIntosh.
- 1999 - Groundbreaking for the South Fayette Water Treatment Plant.

Recreation Activities.

The Water System operates three lakes that are open to the public. Lake Kedron in Peachtree City, Starr's Millpond on Highway 85 and Lake Horton in South Fayette County. All three are open to fishing. Sailboats, row boats and electric motors are allowed. The hours are 6:30 a.m. till 6:30 p.m. EST or 6:30 a.m. till 8:30 p.m. DST. Anyone fishing or boating must comply with all DNR rules and regulations. Docks and boat ramps are available at Lake Horton and Lake Kedron. Lake Horton currently has 2 miles of walking trails. Starr's Mill has picnic tables available.

FAYETTE COUNTY WATER SYSTEM

Population. The population of Fayette County and the number of water customers has increased dramatically in the last 20 years. The County has continued rapid growth and the last census shows a current population of 90,900.

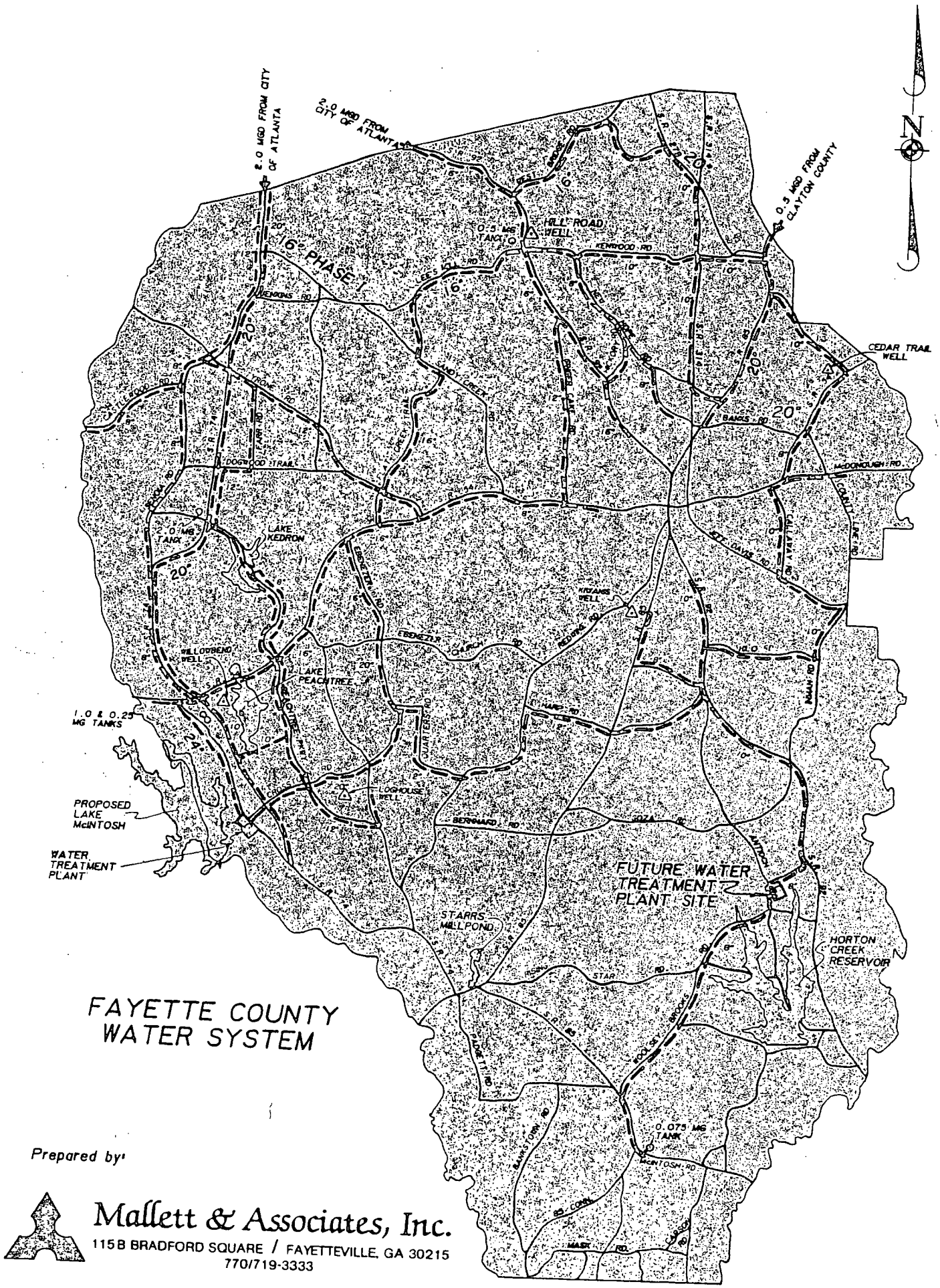
The number of customers on the System is now over 20,000 and the Water System adds approximately 100 customers per month to the system.

Supply and Production. The Fayette County Water System (the "System") currently has a total production capacity of 14.375 million gallons per day (MGD). This capacity includes the 13.5 MGD at the Crosstown Water Plant and an additional .875 MGD from five wells at various locations. In addition, the System has been allocated 6.0 MGD from the City of Atlanta. The total daily available water is 20.375 MGD.

Distribution. The existing water distribution system is extensively developed on the east side of the County in the Fayetteville area, on the west side throughout Peachtree City and Tyrone, and in the unincorporated portions of the County.

The Water System includes more than 450 miles of water lines in various diameters and materials. All water lines are constructed by the Water System's own crews, contracted for with the construction monitored and approved by the Water System's engineer, or are constructed by subdividers and contributed to the Water System upon approval of the construction by the Water System Director.

The system wholesales water to the City of Fayetteville pursuant to a wholesale water contract which expires in the year 2034. The Water System is also the backup supply for the Town of Brooks.



FAYETTE COUNTY WATER SYSTEM

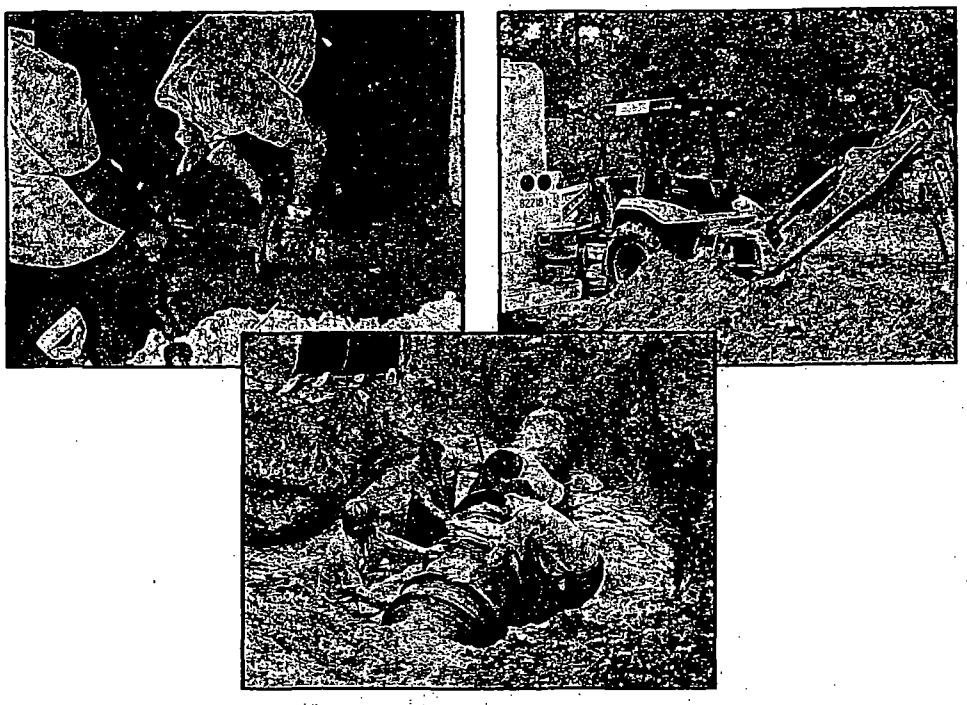
Prepared by:

Mallett & Associates, Inc.

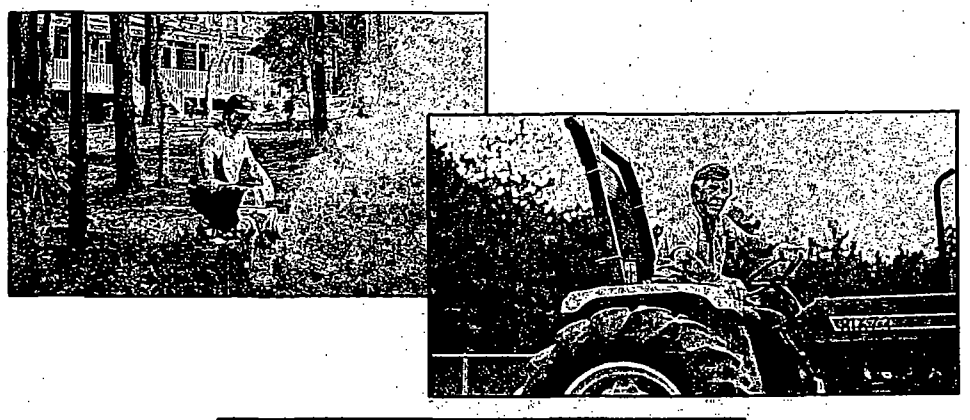
115B BRADFORD SQUARE / FAYETTEVILLE, GA 30215

770/719-3333

LINE INSTALLATION AND REPAIR



The Fayette County Water System has 483 miles of water lines of various diameters that must be maintained in addition to the new lines and meters that must be installed.

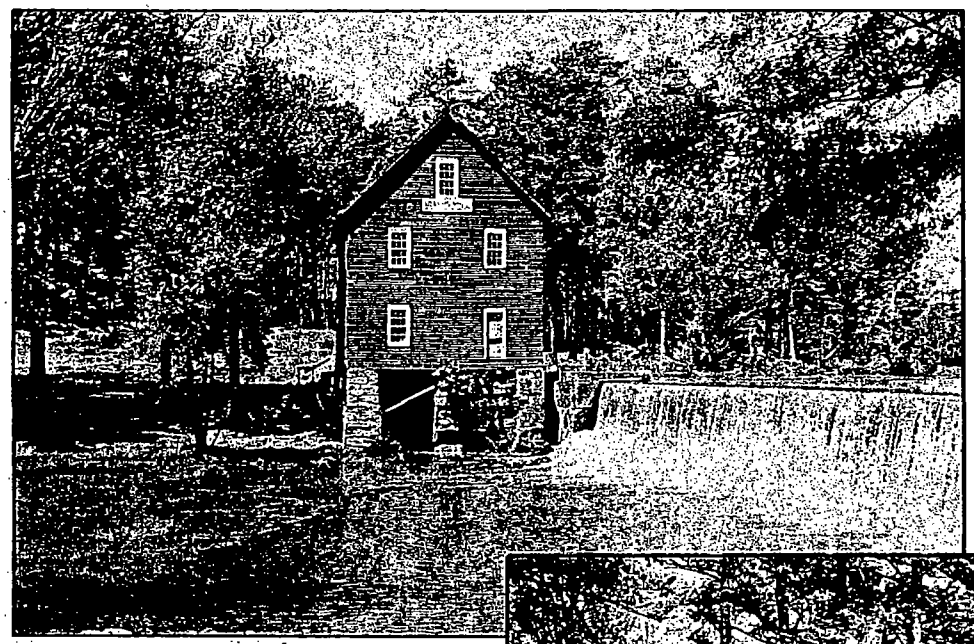


Fire hydrants are flushed at regular intervals.

Maintenance crews take care of the grounds and buildings of the Water System.

Line Locations. Locating water lines for other utilities is an important function of the Water System operation. We are a member of the Utilities Protection Center, Inc. and locate water lines as requested by others.

STARR'S MILL



The Fayette County Water System purchased the historic Starr's Mill in February, 1991. The millpond will be used as an additional water source for the System. This purchase included the mill house, dam, and approximately 16 acres of land. It is located on Highway 85 south of Fayetteville and will continue to be used for fishing, family gatherings and picnics.

AWARDS

The Government Finance Officers Association (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Water System for its component unit financial report for the fiscal year ended June 30, 1998. The Certificate of Achievement is the highest form of recognition for excellence in state and local government financial reporting.

In order to be awarded a Certificate of Achievement, the government published an easily readable and efficiently organized component unit financial report. This report satisfied both generally accepted accounting principals and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. This is the 11th consecutive year that the Water System has received this prestigious award. We believe that our current component unit financial report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

HELPFUL INFORMATION

Billing Policy. The Water System now bills nine cycles per month and your billing date will vary slightly each month. Please note carefully the due date since this will vary each month due to weekends, holidays, etc. Payments must be in our office on or before the due date to avoid a late charge. The Water System does not go by postmarks on the envelopes.

Your service is subject to be interrupted if an amount of $16.00 or over is shown on your bill as "amount past due. "

Your water rates are $16.00 for the first 2,000 gallons and $2.80 every thousand gallons thereafter. The minimum bill is $16.00.

Water Restrictions. The Water System is on the odd even watering restriction program. If the last number of your address is even, then watering would be done on even numbered calendar days. If the last number of your address is odd, then watering would be done on odd numbered calendar days.

Service Charge. There is a $25.00 service charge which is applied to the first billing for all new accounts.

Emergencies. Please report any emergency during normal working hours to our business office at 770-461-1146 since we have radio contact with our men.

After office hours, call the Water Treatment Plant at 770-487-3271.

Also, the Sheriff's Department or Fire Departments will help get in touch with someone in the Water System who can handle the emergency.

Office Hours. The business office, 245 McDonough Road, Fayetteville, is open from 8:00 a.m. until 5:00 p.m. daily, Monday through Friday. The filtration plant in Peachtree City has someone on duty 24 hours per day, seven days per week.

Billing Inquiries 8:00 a.m. until 5:00 p.m., call 770-460-8912.

You May Pay Your Bill At:
First Union Bank
Fayetteville
Peachtree City

The drop boxes located at
Regions Bank,
Crosstown Road
Kedron

Stonewall Government Complex,
Fayetteville.

Or, at the office of the Fayette County Water System, 245 McDonough Road, Fayetteville, Georgia.

If your water service is interrupted for nonpayment, you must pay the entire amount owing on the account, and the $25.00 reconnect fee, at the Fayette County Water System business office at 245 McDonough Road. No payment (cash, money order or check) can be picked up at your residence by an employee of the Water System.

Sewer Rates. $3.50 per 1,000 gallons of metered water usage. Minimum monthly bill is $15.30. For Industrial or Commercial accounts the sewer rate is $2.75 per thousand gallons of metered water usage. Minimum monthly bill is $15.30.

Sewer in Peachtree City is provided by a separate entity and the Water System only bills for them.

How To Read Your Meter. Your water meter is the best detective in the home. It can tell whether you have sizeable leaks, as well as how much water various appliances are using.

Most meters record gallons just as your car's odometer records mileage.

To find how much water you've used in any given period, just subtract the highest meter reading on your last bill from the current meter reading.

To detect a leak, turn off all water in your house and observe the meter. If the red triangle dial is moving at all, water is leaking somewhere since this dial will record even the smallest of leaks. If the red triangular dial is moving rapidly, it probably indicates a major leak, either from the line that goes from the meter to the house or inside the house.

With a major leak, the black numbers on your meter will turn also.

The toilet is one of the most common - certainly one of the sneakiest - and its leaks tend to be invisible.

Most of them occur at the overflow pipe or at the plunger ball inside the tank.

If you've never watched what happens in there, take the tank lid off, flush and pay attention. The water level should come up to about a half inch or so below the overflow pipe.

Gently bend the float arm down, if necessary, so the valve shuts off the water at that level. If the valve itself is leaking, you may need a plumber. That's a bit trickier to fix. *

Finally, drop a little food coloring into the tank and without flushing - see if it comes out in the bowl. If so, you probably have a leak in or around the plunger ball down at the bottom of the tank.

**AWWA, "Be a Leak Seeker"*

Here Are Some Hints For Wise Water Use!*

1. Check every faucet and toilet for leaks. Even a slow drip can waste a lot of water each day.

2. Take short showers and shallow baths.

3. Turn off the water while you are brushing your teeth or scraping the dishes or washing your hands.

4. Don't use the toilet to flush away tissues, gum wrappers or any other small scraps. It is not a trash can!

5. Be careful to water the lawn, not the sidewalk or street.

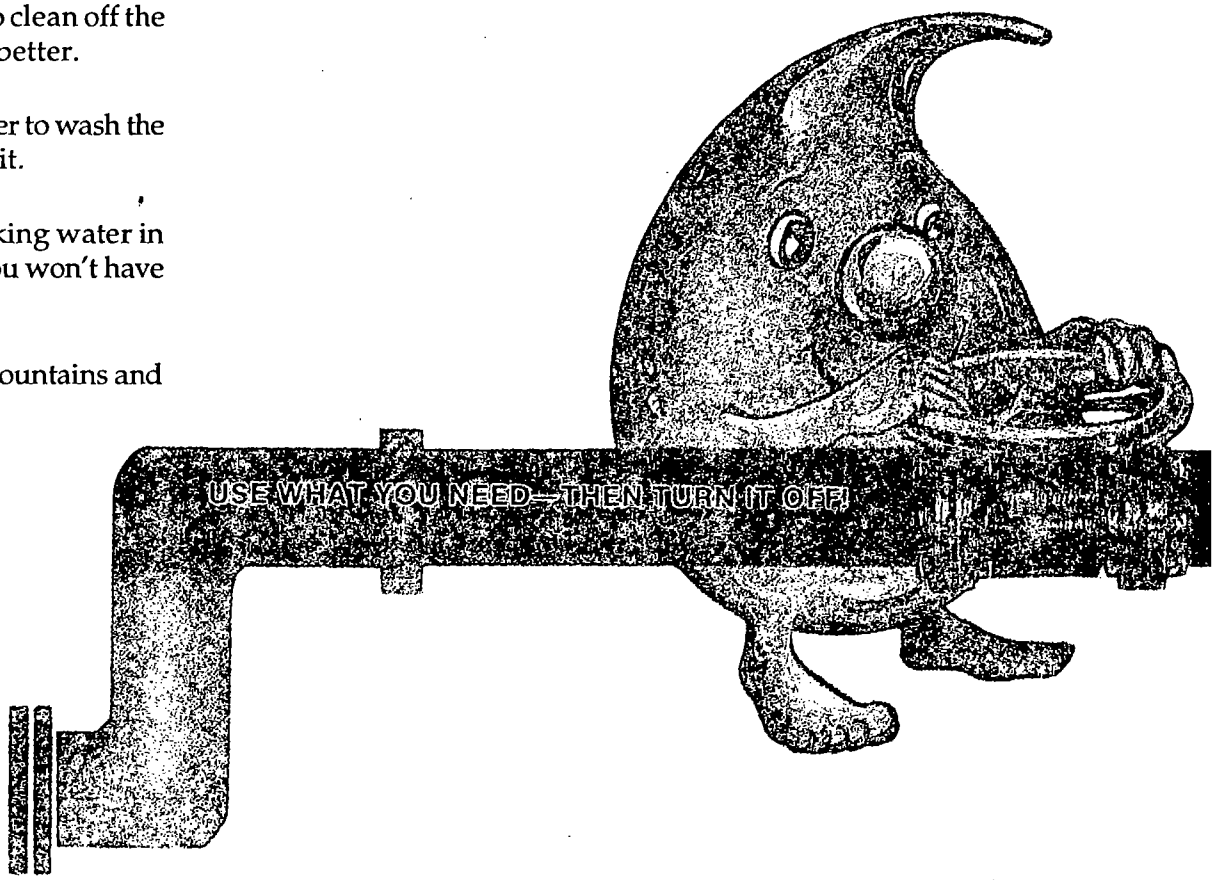
6. Fill the dishwasher and clothes washer with soiled dishes and clothes. Washing partial loads can waste electricity, water and money.

7. Never use a hose to clean off the driveway. A broom is better.

8. Use a bucket of water to wash the car and a hose to rinse it.

9. Keep a jug of drinking water in the refrigerator, then you won't have to run water to cool it.

10. Turn off drinking fountains and sinks in public places.



*AWWA, "The Story of Drinking Water"

Reference 22

COWETA	GA0770001	GRANTVILLE	COMMUNITY	PURCHASED SURFACE WATER	LOCAL GOVERNMENT	500	1300	
Mr. BILLY TUCKER		CITY OF GRANTVILLE	POB 160					
GRANTVILLE		GA 30220-0160	770-583-2289	11/21/2000				
COWETA	GA0770002	NEWNAN	COMMUNITY	SURFACE WATER	LOCAL GOVERNMENT	7194	16843	
Mr. DENNIS MCENTIRE		NEWNAN WATER & LIGHT COMM.	POB 578					
NEWNAN		GA 30264-0578	770-683-5516	10/18/2000				
COWETA	GA0770003	SENOIA	COMMUNITY	PURCHASED SURFACE WATER	LOCAL GOVERNMENT	450	1170	
JOAN TRAMMELL		CITY OF SENOIA	POB 310					
SENOIA		GA 30276-0310	770-599-3679	06/27/2000				
COWETA	GA0770004	TURIN	COMMUNITY	PURCHASED SURFACE WATER	LOCAL GOVERNMENT	153	475	
Mr. W A SMITH		CITY OF TURIN	POB 86					
TURIN		GA 30289-0086	770-599-0777	10/13/1999				
COWETA	GA0770010	CANNONGATE RANCHETTES	COMMUNITY	GROUNDWATER	PRIVATE	43	70	
Mr. LARRY B PARKER		CANNONGATE RANCHETTES	49 HAMMETT WAY					
SHARPSBURG		GA 30277	770-253-1466	10/13/1999				
COWETA	GA0770013	LAKE PLACID	COMMUNITY	GROUNDWATER	PRIVATE	21	44	
Mr. B J BOLEMAN		LAKE PLACID WATER SYSTEM	12 DUCHESS DRIVE					
NEWNAN		GA 30263	770-251-6145	06/05/2000				
COWETA	GA0770014	MEADOWVIEW SUBDIVISION	COMMUNITY	GROUNDWATER	PRIVATE	117	298	
Mr. DAVID M. CAVENDER			606 WILLOW DELL DR.					
SENOIA		GA 30276	770-599-1962	10/24/2000				
COWETA	GA0770016	VALLEY TRAILER COURT	COMMUNITY	GROUNDWATER	PRIVATE	45	117	
Mr. RON BOSWELL		VALLEY MOBILE HOME PARK	POB 130					
MORELAND		GA 30259-0130	770-253-2994	10/13/1999				
COWETA	GA0770021	SOUTH OAKS MOBILE HOME PARK	COMMUNITY	GROUNDWATER	PRIVATE	181	471	
Ms. R. LEA BLEVINS		SOUTH OAKS MHP	240 TINGLE LANE					
PALMETTO		GA 30268	770-463-3070	03/20/2000				
COWETA	GA0770029	K & M MOBILE HOME PARK	COMMUNITY	GROUNDWATER	PRIVATE	41	61	
Mr. RONNIE BOSWELL		K & M MOBILE HOME PARK	POB 144					
MORELAND		GA 30259-0144	770-253-5701	10/13/1999				
COWETA	GA0770030	SWEETBRIAR MOBILE HOME PARK	COMMUNITY	GROUNDWATER	PRIVATE	94	244	
Mr. GREG SMITH		CREATIVE PROP. INVESTMENTS,INC	165 SWEETBRIAR DR.					
PALMETTO		GA 30268	770-716-7598	04/27/2000				
COWETA	GA0770032	EASTWOOD ESTATES	COMMUNITY	GROUNDWATER	PRIVATE	35	101	
Mr. ANTHONY CAVENDER			183 EBENEZER ROAD					
FAYETTEVILLE		GA 30214	770-487-7307	10/13/1999				
COWETA	GA0770037	WEDGEWOOD ESTATES SUBDIVISION	COMMUNITY	GROUNDWATER	PRIVATE	64	174	
Mr. DENNIS H MCDOWELL		DIXIE HILL ENTERPRISES	POB 858					
CARROLLTON		GA 30117-0858	770-834-6362	10/13/1999				
COWETA	GA0770038	HARRIS MOBILE HOME PARK	COMMUNITY	GROUNDWATER	PRIVATE	28	73	
Mr. CLEMIT R HARRIS		HARRIS MOBILE HOME PARK	897 WELCOME ARNCO ROAD					
NEWNAN		GA 30263	770-253-5880	10/13/1999				
COWETA	GA0770040	HICKORY HOLLOW SUBDIVISION	COMMUNITY	GROUNDWATER	PRIVATE	19	49	
Mr. DENNIS H MCDOWELL		DIXIE HILL ENTERPRISES	POB 858					
CARROLLTON		GA 30117-0858	770-834-6362	10/13/1999				
COWETA	GA0770042	COWETA COUNTY	COMMUNITY	PURCHASED SURFACE WATER	LOCAL GOVERNMENT	3555	9243	
Mr. HARRY HUGHES		COWETA CO. WATER & SEWER DEPT.	230 EAST NEWNAN ROAD					
NEWNAN		GA 30263	770-254-3710	06/28/2000				
COWETA	GA0770059	AUTUMN`S GATE MOBILE HOME PARK	COMMUNITY	GROUNDWATER	PRIVATE	150	400	
Mr. CHESTER WILLIAMS		AUTUMN'S GATE MHP	POB 71324					
NEWNAN		GA 30271-1324	770-502-8011	03/21/2000				
COWETA	GA0770093	MONICA WOODS SUBDIVISION	COMMUNITY	GROUNDWATER	PRIVATE	40	143	
Mr. ANTHONY CAVENDER			183 EBENEZER ROAD					
FAYETTEVILLE		GA 30214	770-487-7307	10/13/1999				

						Houses	Pop
COWETA	GA0770097	PLEASANT HILL SHOPPING CENTER	TRANSIENT NON-COMMUNITY	GROUNDWATER	PRIVATE	6	200
Ms. BERNICE WILLIAMSON		PLEASANT HILL SHOPPING CTR.	117 BOONE DRIVE				
NEWNAN		GA 30263	770-253-9947 10/13/1999				
COWETA	GA0770103	PINE HILL EST/HEARTHSTONE SUBDIVISION	COMMUNITY	GROUNDWATER	PRIVATE	140	364
Mr. DENNIS H MCDOWELL		DIXIE HILL ENTERPRISES	POB 858				
CARROLLTON		GA 30117-0858	770-834-6362 01/09/2000				
COWETA	GA0770107	SHOAL CREEK	COMMUNITY	GROUNDWATER	PRIVATE	131	345
Mr. RICHARD F BROWN		SHOAL CREEK SUBDIVISION	116 SHOAL CREEK DRIVE				
SHARPSBURG		GA 30277	706-253-7008 10/13/1999				
COWETA	GA0770109	RUSTICA ESTATES	COMMUNITY	GROUNDWATER	PRIVATE	27	60
Mr. ANTHONY CAVENDER			183 EBENEZER ROAD				
FAYETTEVILLE		GA 30214	770-487-7307 10/13/1999				
COWETA	GA0770113	PINE ACRES MOBILE HOME PARK	COMMUNITY	GROUNDWATER	PRIVATE	35	91
Mr. CECIL BEUGNOT		PINE ACRES MOBILE HOME PARK	POB 308				
PALMETTO		GA 30268-0308	770-463-5242 10/13/1999				
COWETA	GA0770114	ASPEN WOODS LAKE	COMMUNITY	GROUNDWATER	PRIVATE	140	364
Mr. DENNIS H MCDOWELL		DIXIE HILL ENTERPRISES	POB 858				
CARROLLTON		GA 30117-0858	770-834-6362 10/13/1999				
COWETA	GA0770117	THE GATES SUBDIVISION	COMMUNITY	GROUNDWATER	PRIVATE	1	500
Mr. OSCAR CAVENDER		GATES SUBDIVISION	152 EBENEZER ROAD				
FAYETTEVILLE		GA 30214	770-487-7335 10/13/1999				
COWETA	GA0770119	PEACHTREE LANDING SUBDIVISION	COMMUNITY	GROUNDWATER	PRIVATE	41	107
Mr. DENNIS H MCDOWELL		DIXIE HILL ENTERPRISES	POB 858				
CARROLLTON		GA 30117-0858	770-834-6362 10/13/1999				
COWETA	GA0770120	RAMADA LIMITED	TRANSIENT NON-COMMUNITY	GROUNDWATER	PRIVATE	1	25
Mr. VINOD PATEL		RAMADA LIMITED	POB 745				
NEWNAN		GA 30264-0745	770-683-1499 06/07/2000				
COWETA	GA0770121	POINTE COMFORT SUBDIVISION-PHASES 2&3	COMMUNITY	GROUNDWATER	PRIVATE	57	148
Mr. HAROLD D JEWELL			106 JUDY LANE				
FAYETTEVILLE		GA 30214	770-461-4981 01/09/2000				
COWETA	GA0770125	COWETA CO-PARK TIMBERS	COMMUNITY	GROUNDWATER	LOCAL GOVERNMENT	32	83
Mr. EDWARD A WHITLOCK		COWETA CO. WATER & SEWER DEPT.	230 EAST NEWNAN ROAD				
NEWNAN		GA 30263	706-251-4076 05/17/2000				
COWETA	GA0770127	CURETON SPRINGS MOBILE HOME PK	COMMUNITY	GROUNDWATER	PRIVATE	22	60
Mr. GENE CHESTER		CURETON SPRINGS MOBILE HOME PK	1416 CORINTH ROAD				
NEWNAN		GA 30263	706-254-1458 10/13/1999				
CRAWFORD	GA0790000	ROBERT					

FAYETTE GA1130000 BROOKS 101 WELL #1 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 331714 33.28 842733 -84.45 10/13/1999
FAYETTE GA1130001 FAYETTE COUNTY 101 LAKE PEACHTREE INTAKE SURFACE WATER ACTIVE FULL TIME/REGULAR 332259 33.38 843420 -84.57 10/13/1999
FAYETTE GA1130001 FAYETTE COUNTY 102 LINE CREEK INTAKE SURFACE WATER ACTIVE FULL TIME/REGULAR 332139 33.36 843512 -84.58 10/13/1999
FAYETTE GA1130001 FAYETTE COUNTY 103 KIWANIS WELL WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 10/13/1999
FAYETTE GA1130001 FAYETTE COUNTY 104 WILLOWBEND WELL WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 10/13/1999
FAYETTE GA1130001 FAYETTE COUNTY 105 LOGHOUSE WELL WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 10/13/1999
FAYETTE GA1130001 FAYETTE COUNTY 106 ATLANTA WATER SYSTEM GA1210001 PURCHASE CONNECTION SURFACE WATER ACTIVE FULL TIME/REGULAR 10/13/1999
FAYETTE GA1130001 FAYETTE COUNTY 107 HILL ROAD WELL WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 10/13/1999
FAYETTE GA1130001 FAYETTE COUNTY 108 WHITEWATER CREEK INTAKE SURFACE WATER ACTIVE FULL TIME/REGULAR 10/13/1999
FAYETTE GA1130001 FAYETTE COUNTY 109 CEDARTREE WELL WELL GROUNDWATER INACTIVE FULL TIME/REGULAR 332858 33.48 842446 -84.41 10/25/2000
FAYETTE GA1130001 FAYETTE COUNTY 110 CLAYTON COUNTY WATER SYSTEM GA0630000 PURCHASE CONNECTION SURFACE WATER ACTIVE EMERGENCY/BACK-UP 10/13/1999
FAYETTE GA1130001 FAYETTE COUNTY 111 FAYETTEVILLE WATER SYSTEM GA1130003 PURCHASE CONNECTION SURFACE WATER ACTIVE FULL TIME/REGULAR 10/13/1999
FAYETTE GA1130001 FAYETTE COUNTY 112 HORTON CREEK RESERVOIR INTAKE SURFACE WATER ACTIVE FULL TIME/REGULAR 10/13/1999
FAYETTE GA1130001 FAYETTE COUNTY 113 FLINT RIVER (TO HORTON CREEK) INTAKE SURFACE WATER ACTIVE EMERGENCY/BACK-UP 10/13/1999
FAYETTE GA1130001 FAYETTE COUNTY 114 FLAT CREEK (TO LAKE PEACHTREE) INTAKE SURFACE WATER ACTIVE EMERGENCY/BACK-UP 10/24/2000
FAYETTE GA1130003 FAYETTEVILLE 101 GINGER CAKE CREEK INTAKE SURFACE WATER INACTIVE 10/13/1999
FAYETTE GA1130003 FAYETTEVILLE 102 MANASSAS WELL (S-2) WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 10/13/1999
FAYETTE GA1130003 FAYETTEVILLE 103 FAYETTE COUNTY GA1130001 PURCHASE CONNECTION SURFACE WATER ACTIVE FULL TIME/REGULAR 10/13/1999
FAYETTE GA1130003 FAYETTEVILLE 104 VEAL WELL WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 10/13/1999
FAYETTE GA1130003 FAYETTEVILLE 105 WHITE WATER CREEK INTAKE SURFACE WATER ACTIVE FULL TIME/REGULAR 10/13/1999
FAYETTE GA1130005 FAYETTE MOBILE HOME PARK 101 WELL #1 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 333110 33.51 843037 -84.51 10/13/1999
FAYETTE GA1130005 FAYETTE MOBILE HOME PARK 102 WELL #2 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 333105 33.51 843043 -84.51 10/13/1999
FAYETTE GA1130007 DIX LEE`ON ESTATES 101 WELL #1 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 333222 33.53 842728 -84.45 10/13/1999
FAYETTE GA1130007 DIX LEE`ON ESTATES 102 WELL #2 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 333208 33.53 842722 -84.45 10/13/1999
FAYETTE GA1130007 DIX LEE`ON ESTATES 103 WELL #3 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 333220 33.53 842714 -84.45 10/13/1999
FAYETTE GA1130007 DIX LEE`ON ESTATES 104 WELL #4 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 333215 33.53 842718 -84.45 10/13/1999
FAYETTE GA1130007 DIX LEE`ON ESTATES 105 WELL #5 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 333218 33.53 842721 -84.45 10/13/1999
FAYETTE GA1130007 DIX LEE`ON ESTATES 106 WELL #6 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 333208 33.53 842704 -84.45 10/13/1999
FAYETTE GA1130008 NEWTON PLANTATION 101 WELL #1 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 333218 33.53 842617 -84.43 10/13/1999
FAYETTE GA1130008 NEWTON PLANTATION 102 WELL #2 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 333214 33.53 842617 -84.43 10/13/1999
FAYETTE GA1130008 NEWTON PLANTATION 103 WELL #3 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 333205 33.53 842645 -84.44 10/13/1999
FAYETTE GA1130008 NEWTON PLANTATION 104 WELL #4 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 333212 33.53 842653 -84.44 10/13/1999
FAYETTE GA1130009 ROLLING MEADOWS ESTATES 101 WELL #1 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 332428 33.40 842919 -84.48 10/13/1999
FAYETTE GA1130009 ROLLING MEADOWS ESTATES 102 WELL #2 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 332429 33.40 842922 -84.48 10/13/1999
FAYETTE GA1130009 ROLLING MEADOWS ESTATES 104 WELL #4 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 10/13/1999
FAYETTE GA1130010 FOUR SEASONS MOBILE HOME COMM. 101 WELL #1 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 333058 33.51 843154 -84.53 10/13/1999

www.ganet.org/dnr/environ/

FAYETTE GA1130010 FOUR SEASONS MOBILE HOME COMM. 102 WELL #2 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 333046 33.51 843149 -84.53 10/13/1999
FAYETTE GA1130012 LONG'S MOBILE HOME PARK 101 WELL #1 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 333116 33.52 843033 -84.50 10/13/1999
FAYETTE GA1130012 LONG'S MOBILE HOME PARK 102 WELL #2 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 333117 33.52 843041 -84.51 10/13/1999
FAYETTE GA1130016 WOODLAND RD. WATER ASSOCIATION 101 WELL #1 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 333200 33.53 842658 -84.44 10/13/1999
FAYETTE GA1130019 FERNWOOD MOBILE HOME PARK 101 WELL #1 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 332940 33.49 842650 -84.44 10/13/1999
FAYETTE GA1130019 FERNWOOD MOBILE HOME PARK 102 WELL #2 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 332930 33.49 842649 -84.44 10/13/1999
FAYETTE GA1130019 FERNWOOD MOBILE HOME PARK 103 WELL #3 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 332941 33.49 842643 -84.44 10/13/1999
FAYETTE GA1130033 STARRS MILL RIDGE SUBDIVISION 101 WELL #1 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 331901 33.31 843043 -84.51 10/13/1999
FAYETTE GA1130034 LINE CREEK ESTATES 101 WELL #1 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 331906 33.31 843049 -84.51 10/13/1999
FAYETTE GA1130035 WENDELL COFFEE GOLF CENTER 101 WELL #1 WELL GROUNDWATER ACTIVE FULL TIME/REGULAR 10/13/1999

Annual Water Quality Report
Fayette County Water System

P.O. Box 190, 245 McDonough Road, Fayetteville Georgia 30214 - 770-461-1146

This report includes data collected between January 1, 1999 and December 31, 1999

Source of Water

Fayette County Water System gets its water from several sources. The surface water sources are: Lake Kedron, Lake Peachtree, Lake Horton, Line Creek, Starr's Millpond and the Flint River. The well water sources are all in the crystalline aquifer. The purchase water sources are City of Atlanta, City of Fayetteville and Clayton County Water Authority.

Treatment Process

Alum and lime are added to the water taken from the surface water sources to cause the finely divided mud particles to clump together so that the mud and other particles will settle to the bottom of the settling tanks by gravity.

The clear water is filtered and disinfected with chlorine to make the water biologically safe. The pH is adjusted by adding lime and phosphate to make the water non-corrosive, and fluoride is added to prevent dental cavities.

The water from the wells is treated with chlorine and phosphate. Fluoride is added.

Important Information About the Safety of Your Drinking Water

We are pleased to report to you that the drinking water supplied by the Fayette County Water System is safe. The table inside shows that the drinking water in Fayette County gets an excellent report when compared to health standards.

As health scientists learn more about our environment and the effect of substances in the environment on human health, new standards will continue to be set for drinking water. The Fayette County Water System continues to add new technology in order to be able to meet future standards.

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some substances. All water sources, including lakes such as ours, are fed by water that passes over the surface of the land or through the ground. The water dissolves naturally occurring minerals and materials and can pick up substances resulting from the presence of animals or from human activity.

Substances that may be present in source water:

- Biological - may come from human, agricultural, or wildlife sources.
- Inorganic - can be natural, from storm run-off, or from industrial or domestic wastewater discharges.
- Pesticides and herbicides - may come from agriculture, storm run-off or residential use.
- Organic chemicals - may come from industrial or domestic processes, storm run-off, and septic systems.
- Radioactive materials - can be naturally occurring or the result of mining or other human activities.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain substances in water provided by public water systems.

ABOUT FAYETTE COUNTY WATER SYSTEM

The Fayette County Water System is operated as an enterprise fund by the Fayette County Board of Commissioners. The revenue generated by the Water System from water payments and meter charges is used to operate the Water System on a daily basis to insure safe and adequate drinking water for Fayette County customers. The Board has appointed a Water Committee to review and make recommendations concerning the Water System. The Water Committee meets on the 2nd and 4th Wednesday of each month at 8:00 A.M. at 245 McDonough Road, Fayetteville. Approval of the budget, projects and operations of the Water System is by the Board of Commissioners at their regularly scheduled meetings, which are on the 2nd and 4th Thursday of each month at 7:00 P.M., and the first Wednesday at 3:30 P.M.

The Water System currently has 54 employees managed by the Director and a staff of assistants. Daily operations include processing an average of 7,700,000 gallons per day at the water plant on Crosstown Road. State certified operators perform a variety of laboratory tests to ensure the safety of our drinking water. The Distribution team maintains and repairs a variety of different size water lines in the county. They also install new services and run water line extensions as necessary. The administrative office handles all customer related issues such as payment collection, processing and mailing bills to our more than 20,000 customers, answering customer questions and complaints, handling payments and tracking construction projects. Meter reading and billing is done monthly.

The Water System purchased water from the City of Atlanta and Fayetteville in 1999. Copies of their Consumer Confidence Report will be available at the Water System office for public information.

The Water System operates three reservoirs that are open to the public. Lake Kedron is in Peachtree City. Starr's Millpond is on Highway 85 south of Fayetteville and Lake Horton is in South Fayette County. All three are open year round, 6:30 a.m until 6:30 p.m EST or 6:30 a.m. until 8:30 p.m. DST. Sailboats, row boats and canoes are allowed. Only electric motors are allowed. Fishing license is required and all Georgia Fish and Game rules apply. Docks and boat ramps are available at Lake Kedron and Lake Horton. There are two miles of scenic walking trails at Lake Horton.

The Water System is on the odd even watering restriction program. If the last number of your address is even, then outside watering is permitted on even numbered calendar days. If the last number of your address is odd, then outside watering is permitted on odd numbered calendar days.

The Water System is preparing for the future. The six million gallon a day South Fayette Water Treatment Plant is under construction. This water plant will eventually produce 18 million gallons of water a day. Plans are being made to build an additional two million gallon water tank at Lee's Mill Road and Highway 92 North. The Water System has acquired two additional water tank sites. The property for the future Lake McIntosh has been purchased. A 404 permit application is being prepared for the approval to construct the reservoir. The conversion of the water meters to a radio read system is under way. With this system, the meter readings are transmitted from the meter to a computer in the meter reader's vehicle. This is a three year project.

How to read the report

WORD, ACRONYM, SYMBOL, or note	DEFINITION
AL	Action Level means the concentration of a substance that triggers a treatment or other requirement that a water system must follow.
MCL	Maximum contaminant level or Maximum Allowed is the highest amount of a substance (contaminant) allowed in drinking water by EPA.
MCLG	Maximum contaminant level goal or Goal is the ideal goal below which there is no known or expected risk to health. Highest levels are reported to determine compliance. Some are individual readings. Others that are running averages are noted.
Ml	Milliliter or one-thousandth of a liter. One liter = slightly more than a quart.
NA	Not applicable
NTU	nephelometric turbidity units
ppm	parts per million means 1 part per 1,000,000 (same as milligram per liter) and corresponds to 1 minute in 2 years, or 1 penny in $10,000.
ppb	Parts per billion means 1 part per 1,000,000,000 (same as micrograms per liter) and corresponds to 1 minute in 2,000 years or 1 penny in $10,000,000.
TT	Treatment technique means a required treatment technique or process intended to reduce the level of a contaminant in drinking water.
(a)	Fluoride is added in treatment to bring the natural level to the EPA optimum of 1 part per million (see definition of ppm).
(b)	Water from the treatment plant does not contain lead and copper. However under EPA test protocol, water is tested at the tap. Tap tests show that where a customer may have lead pipes or lead-soldered copper pipes, the water is not corrosive. This means the amount of lead and copper absorbed by the water is limited to safe levels.
(c)	This level is based on a system-wide, 4 quarter running average of several samples, as required by EPA testing protocol.
(d)	From 76 to 101 samples are tested each month. No more than 5% can be positive for total Coliform.
<	Less than.
>	More than.

BLENDING OF THE WATER SUPPLY

Supplier	Gallons	Percent
City of Atlanta	111,178,485	3.5
Fayetteville	71,813,700	2.2
Clayton County	0	0
Wells	146,372,544	4.6
Crosstown Water Plant	2,820,404,000	89.6

Copies of the City of Atlanta, City of Fayetteville and Clayton County Water Authority's report are available upon request.

Drinking Water Analysis

Fayette County Water System performed more than 8760 tests during the past year on your drinking water to assess its safety. Tests have been made on more than 160 water quality parameters

Regulated substances

Substances tested and detected	Unit	Goal MCLG	Maximum allowed MCL	Amount detected	Is it safe? (Does it meet standards?)	Probable source
Copper	ppm	1,300	AL=1,300	910 (b)	YES	Corrosion of household plumbing systems
Fluoride (a)	ppm	4	4	1.0	YES	Water additive that promotes strong teeth.
Lead	ppb	0	AL=15	7.4 (b)	YES	Corrosion of household plumbing systems
Nitrate	ppm	10	10	.4	YES	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.
Total Nitrate and Nitrite	ppm	10	10	.4	YES	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.
Turbidity	NTU	NA	TT	.1	YES	Soil runoff.
Trihalomethanes, total	ppb	0	100	71.6 (c)	YES	By-product of drinking water chlorination
Total Coliform	%	0	5% (d)	0.8%	YES	Bacteria naturally present in the environment; used as an indicator that other potentially harmful bacteria may be present.

The presence of contaminants (substances) does not necessarily indicate the water poses a health risk. More information about contaminants and potential health effect can be obtained by calling the Environmental Protection Agencies Safe Drinking Water Hotline at (800) 426-4791.
Additional Information Sources: Web sites about water quality: http://www.epa.gov/ow http://www.awwa.org http://www.dnr.state.ga.us/epd http://www.amwa-water.org

Notice to Immuno-Compromised People

Some people may be more vulnerable to contaminants in drinking water than the general population.

Immuno-compromised people (such as those with cancer undergoing chemotherapy, people with HIV/AIDS or other immune system disorders, some older adults and infants) may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

EPA and the Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline, (800) 426-4791.

Record of Telephone Conversation

Reference 24

Date: March 1, 2001 Time: 1500	Photocircuits Atlanta, Inc. Peachtree City, Fayette Co., Georgia EPA ID Number: GAD095811162
Organization: TN & Assoc., Inc., Reg. 4 EPA STAT Contract Name: Holly Stoddard Signature:	Contacted: Mr. Tony Parrott Fayette County Water System Director 245 McDonough Road, Fayetteville, GA 30214 770-461-1146

Subject: Water System Information for Peachtree City

Spoke with Mr. Tony Parrott about the water system in Fayette County. He could not tell me the exact flow rate for the intake at Line Creek. He also was unaware of the Photocircuits well being connected to the Fayette County Water System. He was aware the well existed but thought it was being used for non-drinking purposes. I asked about the depth of the Loghouse Well and the Willowbend Well and he said that he was not completely sure of their depth but that they were both well over 70 feet. He believes the Loghouse well, which was drilled in the 1960's is around 310-350 feet deep. Mr. Parrot is in the highest position within the Fayette County Water System and upon talking to other employees of the Fayette County Water System and Peachtree City Water and Sewer, no one else could answer my question and they all referred me to Tony Parrot.

RESPONSE REQUIRED

(x) None ( ) Phone call ( ) Memo ( ) Letter ( ) Report

cc: (x) File (x) Project Manager ( ) Principal Investigator ( ) Other (specify)

Record of Telephone Conversation

Reference 25

Date: January 20, 2001 Time: 0930	Photocircuits Atlanta, Inc. Peachtree City, Fayette Co., Georgia EPA ID Number: GAD095811162
Organization: TN & Assoc., Inc., Reg. 4 EPA STAT Contract Name: Holly Stoddard Signature:_____	Contacted: Mr. Tony Parrott Fayette County Water System Director 245 McDonough Road, Fayetteville, GA 30214 770-461-1146

Subject: Water System Information for Peachtree City

Spoke with Mr. Tony Parrott about the water system in Fayette County. He could not tell me the exact flow rate or people using water in Peachtree City. He can only give information for the entire county that is covered by Fayette County Water System. The system has surface water intakes: Peachtree Lake, Lake Kedron, Lake Horton, Line Creek, . Peachtree City did have some intakes closed in the last two years due to sewer spillage. There are 3 private intakes on Line Creek: Union Water and Light, Planter Ridge Golf, and Peachtree City Rockaway Ball Field. Brooks County has a water system that uses wells and they borrow water from Fayette County when needed. Fayette County water also buys approximately 6.0 Million Gallons per Day (MGD) from the city of Atlanta. The system serves about 57,860 people in the county.

RESPONSE REQUIRED

(x) None ( ) Phone call ( ) Memo ( ) Letter ( ) Report

cc: (x) File (x) Project Manager ( ) Principal Investigator ( ) Other (specify)

Reference 26

RAW WATER WITHDRAWALS FOR 2000.
THAT IS TO BE TREATED AT THE TREATMENT PLANT

	P'TREE	LINE CK.	(x 1000) STARR'S LAKE	(5 Jun 97) HORTON	TOTAL	(15 Jul 97) FLINT RIVER
JAN						
PUMPED	20,802	-	18,652	158,714	198,168	204,403
AVG.	671	-	602	5,120		6,594
MAX.	3,858	0	1,537	7,971		7,971
FEB						
PUMPED	7,224	0	9,168	197,566	213,958	203942
AVG.	258	-	327	7,056		7,284
MAX.	3,454	0	1,900	7,795		8,227
MAR						
PUMPED	5,033	1,522	2,938	222,136	231,629	149,414
AVG.	162	49	95	7,166		4,820
MAX.	1,413	895	1,498	7,815		
APR						
PUMPED	34,358	-	2,073	212,466	248,897	103,129
AVG.	1,145	-	69	7,082		3,438
MAX.	3,789	0	1,032	7,494		8,554
MAY						
PUMPED	108738	27074	514	209736	346,062	23793
AVG.	3,508	873	17	6,766		768
MAX.	4,200	1,764	326	7,852		8387
JUN						
PUMPED	117,547	2613	3220	221,252	344,632	-
AVG.	3,918	87	107	7,375		-
MAX.	4,118	797	1,512	7,855		0
JUL						
PUMPED	112,894	2,883	1,861	221,437	339,075	0
AVG.	3,642	93	60	7,143		-
MAX.	3,896	783	602	7,906		0
AUG						
PUMPED	109,517	-	3,588	204,065	317,170	2,995
AVG.	3,533	-	116	6,583		97
MAX.	3,911	0	1,363	7,804		2,995
SEP						
PUMPED	49,421	-	4,719	179,820	233,960	125,907
AVG.	1,647	-	157	5,994		4,197
MAX.	3,131	0	1,337	7,559		9,360
OCT						
PUMPED	87,075	0	4,163	184,236	275,474	58,878
AVG.	2,809	0	134	5,943		1,899
MAX.	3,925	0	957	7,572		
NOV						
PUMPED	65,454	0	12,983	153,244	231,681	171,531
AVG.	2,182	0	433	5,108		5,718
MAX.	3,924	0	1,884	7,141		9,715
DEC						
PUMPED	39,390	0	6,913	174,586	220,889	267314
AVG.	1,271	-	223	5,632		8,623
MAX.	3,018	0	1,622	6,481		9,586

Reference 27

Wetland Data Provided by the U.S. Fish and Wildlife Service's National Wetland Inventory

- Estuarine Unvegetated
- Estuarine Vegetated
- Lacustrine Unvegetated
- Lacustrine Vegetated
- Marine Unvegetated
- Marine Vegetated
- Palustrine
- Riverine Unvegetated
- Riverine Vegetated
- Upland
- No Data Available
- Streams
- States
- Counties

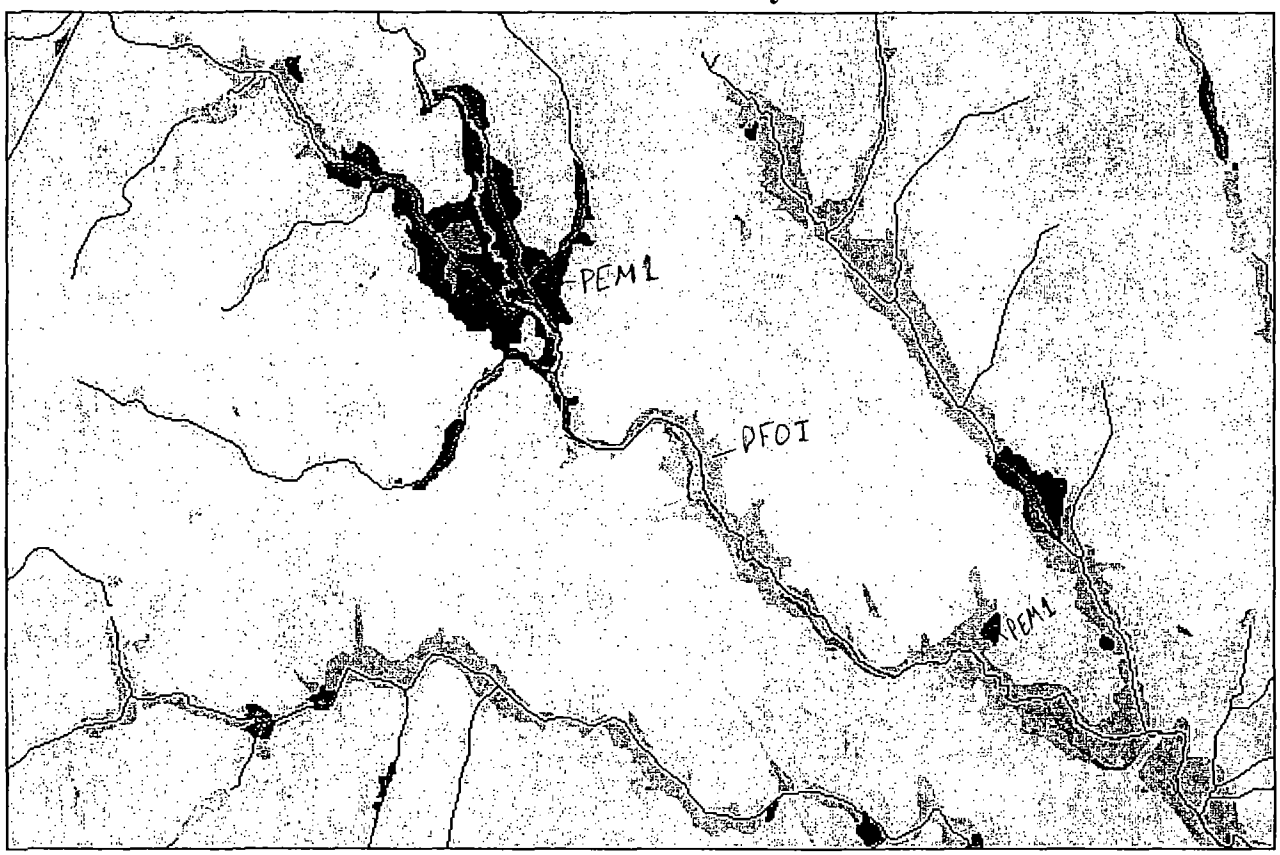
5 0 5 10 15
km

PFO Total - 12 miles

PEM Total - 1 mile

MAP 1

Wetland Data Provided by the U.S. Fish and Wildlife Service's National Wetland Inventory



- L1UB
- PEM1
- PFO1
- PSS1
- PUB
- R2UB
- Upland
- No Data Available
- Streams
- States
- Counties

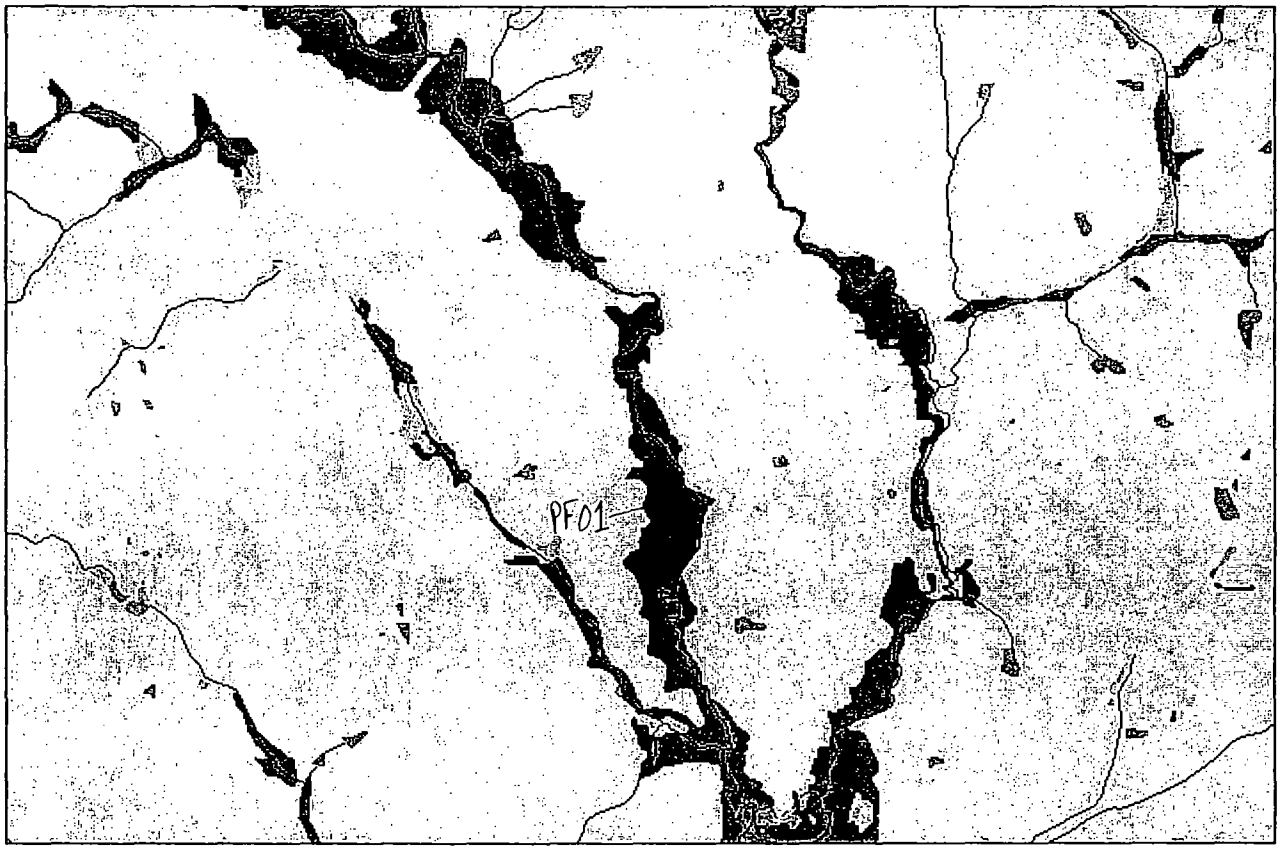
1 0 1 2 3 4
km

1 mile

PEM - 1 mile
PFO - 4 miles

MAP 2

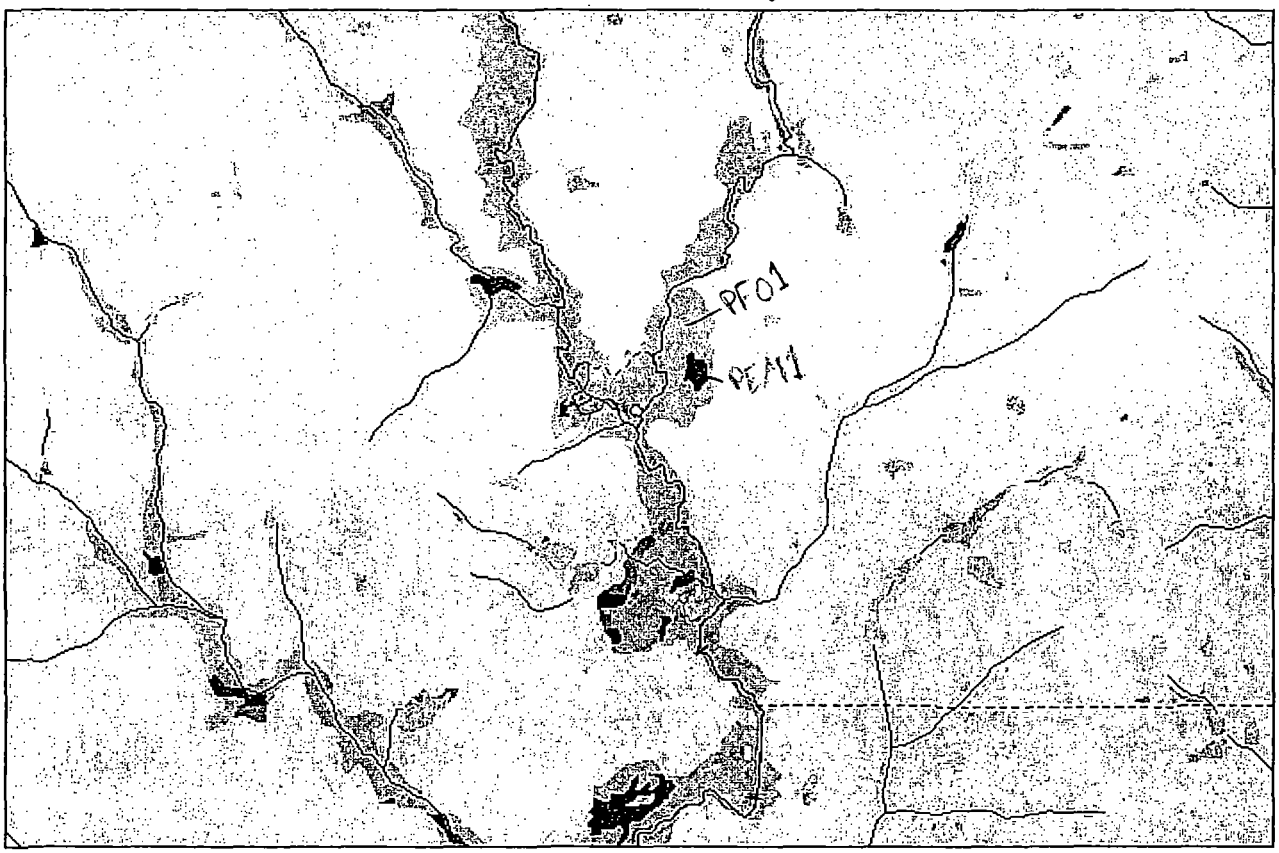
Wetland Data Provided by the U.S. Fish and Wildlife Service's National Wetland Inventory



PFO - 4 miles

MAP 3

Wetland Data Provided by the U.S. Fish and Wildlife Service's National Wetland Inventory



- L1UB
- PEM1
- PFO1
- PSS1
- PUB
- R2UB
- Upland
- No Data Available
- Streams
- States
- Counties

1 0 1 2 3 4
km

PFO - 4miles

Known Locations of Rare and Other Special Concern Animals,
Plants and Natural Communities in GNHP Database for:

FAYETTE COUNTY

Index of Georgia Counties

"US" indicates both U.S. protected and Georgia protected species
"GA" indicates Georgia protected species
List generated on: Tuesday October 31, 2000

Animals

Species Common Name **Global Rank** State Rank **Federal Status** State Status **Habitat in Georgia**

- <>*Etheostoma swaini* Gulf Darter - G5 S3 — — Small to medium streams with moderate current over substrates of sand and detritus
- <>*Necturus sp. cf. beyeri* Gulf Coast Waterdog - G4 S3 — — Habitat data not available
- GA <>*Notropis hypsilepis* Highscale Shiner - G3 S3 — T Flowing areas of small to large streams over sand or bedrock substrates
- <>*Strophitus subvexus* Southern Creekmussel - G3 S2 — — Sand to sandy mud in slow or no current in small to large creeks
- <>*Utterbackia peggyae* Florida Floater - G3 S2 — — Sluggish streams or ponds in sandy to muddy substrate
- <>*Villosa villosa* Downy Rainbow - G3 S3 — — Sand, muddy, and silty substrates from spring-fed streams to muddy slow moving waters

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Plants

- <>*Listera australis* Southern Twayblade - G4 S2 — — Poorly drained circumneutral soils

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Natural Communities

- No natural community records in GNHP database for Fayette County

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Index of Georgia Counties

Georgia Natural Heritage Program
Nongame Wildlife & Natural Heritage Section
2117 US Hwy 278 SE
Social Circle, GA 30025
(770) 918-6411

Edition date: November 26, 2000

GEORGIA NATURAL HERITAGE PROGRAM

EXPLANATION OF RARITY RANKS AND LEGAL STATUSES

The "State Rank" and "Global Rank" codes indicate relative rarity of species statewide and range-wide, respectively. An explanation of these codes follows. For further information please see Heritage Status: Global, National, and Subnational Conservation Status Ranks at NatureServe.

STATE [GLOBAL] RANK

S1[G1]	Critically imperiled in state [globally] because of extreme rarity (5 or fewer occurrences).
S2[G2]	Imperiled in state [globally] because of rarity (6 to 20 occurrences).
S3[G3]	Rare or uncommon in state [rare and local throughout range or in a special habitat or narrowly endemic] (on the order of 21 to 100 occurrences).
S4[G4]	Apparently secure in state [globally] (of no immediate conservation concern).
S5[G5]	Demonstrably secure in state [globally].
SA	Accidental in state, including migratory or wide-ranging species recorded only once or twice or at very great intervals.
SN	Regularly occurring, usually migratory and typically nonbreeding species.
SR	Reported from the state, but without persuasive documentation (no precise site records and no verification of taxonomy).
SU[GU]	Possibly in peril in state [range-wide] but status uncertain; need more information on threats or distribution.
SX[GX]	Apparently extirpated from state [extinct throughout range]. GXC is known only in cultivation/captivity.
SE	An exotic established in state. May be native elsewhere in North America. Sometimes difficult to determine if native (**SE?**).
SH[GH]	Of historical occurrence in the state [throughout its range], perhaps not verified in the past 20 years, but suspected to be still extant.
[T]	Taxonomic subdivision (trinomial, either a subspecies or variety), used in a global rank, for example "G2T2."
Q	Denotes a taxonomic question - either the taxon is not generally recognized as valid, or there is reasonable concern about its validity or identity globally or

	at the state level.
?	Denotes questionable rank; best guess given whenever possible (e.g. **S3?**).

FEDERAL STATUS (US Fish and Wildlife Service, USFWS)

The following abbreviations are used to indicate the legal status of federally-protected plants and animals or those proposed for listing. For further information please see U.S. ESA: NatureServe Data for Listed Status in the United States.

LE	Listed endangered. The most critically imperiled species. A species that may become extinct or disappear from a significant part of its range if not immediately protected.
LT	Listed threatened. The next most critical level of threatened species. A species that may become endangered if not protected.
PE or PT	Candidate species currently proposed for listing as endangered or threatened.
C	Candidate species presently under status review for federal listing for which adequate information exists on biological vulnerability and threats to list the taxa as endangered or threatened.
PDL	Proposed for delisting.
E(S/A) or T (S/A)	Listed endangered or threatened because of similarity of appearance.
(PS)	Indicates "partial status" - status in only a portion of the species' range. Typically indicated in a "full" species record where an infraspecific taxon or population has U.S. ESA status, but the entire species does not.

STATE STATUS (Georgia Department of Natural Resources, GA-DNR)

The following abbreviations are used to indicate the status of state-protected plants and animals or those proposed for state-protection in Georgia.

E	Listed as endangered. A Species which is in danger of extinction throughout all or part of its range
T	Listed as threatened. A Species which is likely to become an endangered species in the foreseeable future throughout all or parts of its range.
R	Listed as rare. A species which may not be endangered or threatened but which should be protected because of its scarcity.

U	Listed as unusual (and thus deserving of special consideration). For example plants subject to commercial exploitation would have this status.

NOTE:
This is a working list and is constantly revised. For the latest changes, acknowledgment of numerous sources, interpretation of data, or other information connected with this list, please contact:

Greg Krakow, Data Manager
Georgia Department of Natural Resources
Wildlife Resources Division
Georgia Natural Heritage Program
2117 U.S. Highway 278 S.E.
Social Circle, Georgia 30025-4714
Phone: 770-918-6411
Fax: 706-557-3033
E-mail: greg_krakow@mail.dnr.state.ga.us

The proper citation for this list is:

Georgia Natural Heritage Program. [Edition date from top right corner]. [Title from top center]. Georgia Department of Natural Resources, Social Circle.

Facilities

PHOTOCIRCUITS IS ONE OF NORTH AMERICA'S LARGEST FABRICATORS. WE PRODUCE 800,000 SQUARE FEET OF PCBs A WEEK!

Photocircuits' manufacturing facilities comprise 19 buildings - 900,000 square feet under roof - spread over 55 acres in Glen Cove, NY; Peachtree City, GA; Heredia, Costa Rica; and Monterrey, Mexico. Chock full of process equipment under control of our 4,100 employees, our factories are here for you.

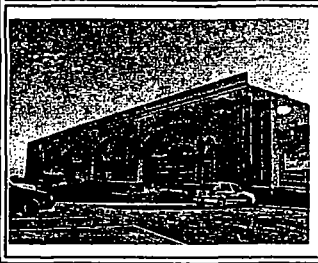
Though 800 miles apart, our northern and southern facilities support each other seamlessly. Glen Cove has capacity to build 270,000 square feet of 2 through 12 layer product each week while serving as the mass laminator for Peachtree City, where our print-and-etch and fine-line processes are found. With Peachtree City's and Glen Cove's capacity, Photocircuits can produce nearly 800,000 square feet of printed circuits during a 5.5-day work week. What's more, we schedule our work so that surge capacity is available whenever our customers encounter an unplanned requirement. And when we begin bumping up against capacity within an operation, we install more. Our need to tool ever more jobs led us to open a CAM tooling center in Costa Rica where we produce tools around the clock. Because our customers wanted us closer to their Mexican facilities,

we opened our back-end operation there. We simply refuse to disappoint any of our customers.

Best of all we offer our capacity and capabilities not only to the company with 50,000 employees, but also to the company with 15 employees. Our MVP customers, many of which order as little as 60 square feet of circuits at a time, have enjoyed our nearly 100% on-time shipments since we conceived MVP in 1996.

Let's look closer at the facilities that make all this possible.

Glen Cove	
	**2,400 employees** **18.5 acres** **9 buildings** **Over 400,000 square feet**
Peachtree City	
	1,400 employees **30 acres** **8 buildings** **400,000 square feet**
Heredia, Costa Rica	
	**210 employees** **1 building** **50,000**

	**square feet**
Monterrey, Mexico	
	**100 employees** **1 building** **80,000 square feet**

And much more ... Equipment

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Photocircuits **CORPORATION** 31 Sea Cliff Avenue Glen Cove, NY 11542	**Photocircuits** **CORPORATION** 350 Dividend Drive Peachtree City, GA 30269
Phone: 516-609-1000 **FAX: 516-609-1383**	**Phone: 770-487-8888** **FAX: 770-487-7746**

POPULATION WORKSHEET	
Photocircuits Atlanta Inc. Peachtree City, GA **GAD 095 811 162**	
Population Radius	**Population**
0.25 Mile	0
0.50 Mile	0
1 Mile	38
2 Mile	407
3 Mile	8554
4 Mile	15259
Population Ring*	**Population**
0 to 0.25 Mile	0
0.25 to 0.5 Mile	0
0.5 to 1 Mile	38
1 to 2 Mile	369
2 to 3 Mile	8147
3 to 4 Mile	6705

*Population rings were determined by subtracting out the previous area's value from the current population value.

Reference: LandView IV

Name: Holly Stoddard

Signature: Holly Stoddard

TN&Associates, Inc.
840 Kennesaw Avenue, Suite 7
Marietta, GA 30060
(678) 355-5550

LandView 1990 Census Population Estimator

Step 1: Enter Latitude and Longitude. The defaults are the current MARPLOT map values.
Or, you may enter your own values in Degrees/Minutes/Seconds, or Decimal Degrees.
Step 2: If you entered the Latitude & Longitude, choose the approporiate Hemisphere.
The continental U.S. is North and West.
Step 3: Enter the Radius.
Step 4: Press the Calculate Population button.

	deg.	min.	sec.	hemisphere	decimal degrees
Latitude	33	20	49	(•) North ( ) South	33.347222
Longitude	84	34	45	(•) West ( ) East	84.579167

Main Menu

Enter Radius 0.25 miles

Calculate Population

Clear all fields | Refresh Lat/Long from MARPLOT | Print this screen | Show this radius on map

Note: Population Statistics are not available for Virgin Islands., Guam, American Samoa, and N. Mariana Islands.
Race statistics are not available for Puerto Rico.

Results

Total population:	0	White:	0
Housing units:	0	Black:	0
Census Block count:	0	Indian:	0
Area within radius (sq. mi.):	0.196	Asian:	0
		Hispanic	0

LandView 1990 Census Population Estimator

Step 1: Enter Latitude and Longitude. The defaults are the current MARPLOT map values.
Or, you may enter your own values in Degrees/Minutes/Seconds, or Decimal Degrees.
Step 2: If you entered the Latitude & Longitude, choose the approporiate Hemisphere.
The continental U.S. is North and West.
Step 3: Enter the Radius.
Step 4: Press the Calculate Population button.

	deg.	min.	sec.	hemisphere	decimal degrees
Latitude	33	20	49	(•) North ( ) South	33.347222
Longitude	84	34	45	(•) West ( ) East	84.579167


Main Menu

Enter Radius 0.5 miles [Calculate Population]

[Clear all fields] [Refresh Lat/Long from MARPLOT] [Print this screen] [Show this radius on map]

Note: Population Statistics are not available for Virgin Islands., Guam, American Samoa, and N. Mariana Islands.
Race statistics are not available for Puerto Rico

Results

Total population:	0	White:	0
Housing units:	0	Black:	0
Census Block count:	0	Indian:	0
Area within radius (sq. mi.):	0.785	Asian:	0
		Hispanic	0

LandView 1990 Census Population Estimator

Step 1: Enter Latitude and Longitude. The defaults are the current MARPLOT map values.
Or, you may enter your own values in Degrees/Minutes/Seconds, or Decimal Degrees.
Step 2: If you entered the Latitude & Longitude, choose the approporiate Hemisphere.
The continental U.S. is North and West.
Step 3: Enter the Radius.
Step 4: Press the Calculate Population button.

	deg.	min.	sec.	hemisphere	decimal degrees
Latitude	33	20	49	(•) North ( ) South	33.347222
Longitude	84	34	45	(•) West ( ) East	84.579167

Main Menu

Enter Radius 2 miles [Calculate Population]

[Clear all fields] [Refresh Lat/Long from MARPLOT] [Print this screen] [Show this radius on map]

Note: Population Statistics are not available for Virgin Islands, Guam, American Samoa, and N. Mariana Islands.
Race statistics are not available for Puerto Rico.

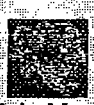
Results

Total population:	407	White:	397
Housing units:	164	Black:	8
Census Block count:	12	Indian:	1
Area within radius (sq. mi.):	12.566	Asian:	0
		Hispanic:	3

LandView 1990 Census Population Estimator

Step 1: Enter Latitude and Longitude. The defaults are the current MARPLOT map values.
Or, you may enter your own values in Degrees/Minutes/Seconds, or Decimal Degrees.
Step 2: If you entered the Latitude & Longitude, choose the approporiate Hemisphere.
The continental U.S. is North and West.
Step 3: Enter the Radius.
Step 4: Press the Calculate Population button.

	deg.	min.	sec.	hemisphere	decimal degrees
Latitude	33	20	49	(•) North ( ) South	33.347222
Longitude	84	34	45	(•) West ( ) East	84.579167


Main Menu

Enter Radius 3 miles [Calculate Population]

[Clear all fields] [Refresh Lat/Long from MARPLOT] [Print this screen] [Show this radius on map]

Note: Population Statistics are not available for Virgin Islands., Guam, American Samoa, and N. Mariana Islands.
Race statistics are not available for Puerto Rico.

Results

Total population:	8554	White:	8046
Housing units:	2888	Black:	174
Census Block count:	61	Indian:	9
Area within radius (sq. mi.):	28.274	Asian:	293
		Hispanic	219

LandView 1990 Census Population Estimator

Step 1: Enter Latitude and Longitude. The defaults are the current MARPLOT map values.
Or, you may enter your own values in Degrees/Minutes/Seconds, or Decimal Degrees.
Step 2: If you entered the Latitude & Longitude, choose the approporiate Hemisphere.
The continental U.S. is North and West.
Step 3: Enter the Radius.
Step 4: Press the Calculate Population button.

	deg.	min.	sec.	hemisphere	decimal degrees
Latitude	33	20	49	(•) North ( ) South	33.347222
Longitude	84	34	45	(•) West ( ) East	84.579167

Main Menu

Enter Radius 4 miles [Calculate Population]

[Clear all fields] [Refresh Lat/Long from MARPLOT] [Print this screen] [Show this radius on map]

Note: Population Statistics are not available for Virgin Islands., Guam, American Samoa, and N. Mariana Islands.
Race statistics are not available for Puerto Rico.

Results

Total population:	15259	White:	14051
Housing units:	5348	Black:	684
Census Block count:	208	Indian:	20
Area within radius (sq. mi.):	50.265	Asian:	466
		Hispanic	324